Serfoji Royal 1817

MEDICAL COMMENTARIES,

FOR THE YEAR 1780;

EXHIBITING

A CONCISE VIEW OF THE LATEST AND MOST IMPORTANT DISCOVERIES IN MEDICINE AND MEDICAL PHILOSOPHY.

COLLECTED AND PUBLISHED

BY

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Neglecta reducit, sparsa colligit, utilia selegit, necessaria ostendit, sic utile. BAGLIVI.

SECOND EDITION.

VOLU[illegible]E SEVENTH.

PRI[illegible]

The Firſt Edition of this Volume of

MEDICAL COMMENTARIES

Was dedicated to the late ingenious and amiable

DR WILLIAM KEIR, OF LONDON.

With the moſt ſincere Regret for that untimely Event,

Which deprived

The Medical World of one of its brighteſt Ornaments,

And the Editor of a moſt valuable Friend,

This ſecond Impreſſion

Is inſcribed to his Memory,

By an Admirer of his Abilities and Virtues,

ANDREW DUNCAN.

Beneficiis enim humana vita conſiſtit et concordia; nec terrore ſed mutuo amore in fœdus auxiliumque commune conſtringitur.

SENECA.

Mihi quanquam eſt ſubito ereptus, vivit tamen: Virtutem enim illius viri ſemper amavi, quæ non extincta eſt.

CICERO, *De Amicitia*.

ADVERTISEMENT.

AT the beginning of the eighth volume of theſe Commentaries, I intimated, that the work would hereafter be continued under the form of an annual volume, in place of quarterly numbers. When it has now, therefore, become neceſſary to reprint the preſent volume, I have altered the former arrangement, dividing it into four ſections only, that it may better correſpond with future volumes of this publication.

Edinburgh, Aug. 12. 1783.

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PREFACE.

AFTER ſix volumes of the Edinburgh Medical Commentaries have been already publiſhed, and when it is intended that they ſhall ſtill be continued on the ſame plan as formerly, it may ſeem ſtrange that any change ſhould have been made in the Title of the work. It cannot be alleged that any circumſtance has occurred which renders this change neceſſary. But it will perhaps be reckoned a ſufficient apology for this alteration, that I have been induced to it by reaſons with which I reckon it needleſs to trouble the reader.—Every one muſt be ſenſible, that the merit of the work can neither be encreaſed nor diminiſhed by the Title.

When, however, I am now to take upon myſelf, what has hitherto been preſented to the Public as the work of a Society; it may naturally be preſumed, that the abilities of an individual

will be found unequal to the undertaking. To remove this apprehenſion, I may obſerve, that the compilation of this work will not hereafter be more dependent on my exertions than it has already been. I ſhall ſtill be regularly aided by ſome Gentlemen, whoſe reputation can receive no addition from drawing up a proper analyſis of the works of others. And I flatter myſelf that thoſe advantages which the medical practitioner may derive from it, will ſuffer no diminution on the preſent change.

In a work of this nature, it cannot be ſuppoſed that every article will be equally ſuited to the taſte of every reader. Diſcoveries, with reſpect to their importance, will be very differently eſtimated by different readers. There is, however, no medical practitioner, duly anxious to afford the utmoſt poſſible aid to his patient, who will not wiſh to receive a proper account of every diſcovery that is even alleged to be made. And the introduction of articles, which by ſome may be reckoned but of little importance, is at leaſt a leſs culpable error, than the omiſſion of improvements which in the hands of any one have been ſuppoſed productive of advantages, or ſubſervient to utility. If, therefore, ſufficient attention

ention be beſtowed in giving an account of every diſcovery, whether real or imaginary, the intrinſic value of the work muſt depend, not upon the merit of the compiler, but of the original author.

While, however, as being merely the compiler of this work, I thus relinquiſh the praiſe to which it may be entitled from its utility; I muſt ſtill acknowledge myſelf anſwerable for its imperfections. But I flatter myſelf, that every reader will do me the juſtice to believe, that any omiſſions which may be detected have in no caſe proceeded from want of candour, but ſolely from want of information. And I am even tempted to think, that from a careful peruſal of the former volumes, the attentive reader will either find a proper account of all the more important diſcoveries which have been publiſhed ſince the commencement of this work, or be directed to the ſource from whence the moſt full information may be derived.

The ſame induſtry in the collection of materials calculated either to improve the healing art, or to gratify curioſity, which has hitherto ſupported the credit and extended the ſale of this periodical publication, will ſtill, I truſt, give it

ſome claim to the favour of the Public. And unleſs we ſuppoſe, either that medicine is incapable of improvement, or that the preſent age is incapable of diſcovery, every honeſt and attentive practitioner, who has not the moſt ready acceſs to the fulleſt informations from other channels, will be anxious to avail himſelf of thoſe advantages which it affords.

But upon this ſubject I may, perhaps, even go one ſtep farther, and allege, that it is not merely their duty to encourage, but to aid this work. An undertaking which has for its object the diffuſing that knowledge which is calculated for alleviating the calamities of mankind, naturally lays claim to the aſſiſtance of every humane mind; and there are very few medical practitioners to whom facts do not frequently occur, which, while they afford improvement to themſelves, might alſo be inſtructive to others. How much then is it to be regretted, that theſe uſeful leſſons ſhould either be confined entirely to them, or extended only to the narrow circle of their own acquaintance? A reluctance to any public appearance, or the hurry of other engagements, is but an unſatisfactory apology for withholding from the public what might relieve the diſtreſs

diſtreſs even of a ſingle individual. From theſe conſiderations, then, as long as medicine continues to be practiſed by liberal minds, or on liberal principles, there is reaſon to believe, that improvements will daily be made, and freely communicated.

Of theſe, there are many which cannot be properly publiſhed through the channel either of this, or of any other periodical work. From the limits within which it is neceſſary to confine this work, original obſervations, which do not extend to any great length, can alone be introduced into it. But under the ſection of Medical News, ſuch an account, even of the longeſt papers, as will afford acceptable information to the reader, may with great propriety have a place. And from this method of announcing diſcoveries, the particular date at which they were made will be certainly fixed.—Thus diſagreeable diſputes, reſpecting the priority of diſcovery, may be avoided.

While, however, there are many ingenious and uſeful Eſſays, which can only have a place in this work, either on the footing now mentioned, or in the form of an analyſis, after publication through other channels; there are

other interefting remarks, which may be brought within fuch limits as to be introduced into thefe Commentaries in their original form. From the experience of feveral years, it has been found, that interefting obfervations of this nature have not been wanting; and any one who confiders the high and eftablifhed reputation of many of thofe Gentlemen whofe obfervations have enriched this department in former Numbers of the Medical Commentaries, muft be fenfible, that they have been principally actuated by a zeal for medical improvement. This, however, can in no degree detract from the favour they have conferred on the Collector of this work, by adding to the value of the publication.

While I thus return them my moft fincere acknowledgments for the aid which I have formerly received, I hope it will be unneceffary to folicit future affiftance. The fame benevolent fpirit muft ftill prompt them to wifh, that their obfervations may be as extenfively ufeful as poffible; and this motive muft operate no lefs powerfully with many others, of the benefit of whofe judicious remarks the medical world has hitherto been totally deprived.

Hence

Hence I am induced to hope, that the change which has been made in the Title of this work, will not diminiſh the aſſiſtance with which I ſhall be favoured from induſtrious and diſcerning practitioners. And I have only to add, that while by enriching theſe Commentaries, they ſhall have the ſatisfaction of having contributed to the improvement of the healing art, it will not, I hope, diminiſh the compenſation for their labours which this reflection may afford them, that they have at the ſame time conferred an obligation on their

Moſt obedient Servant,

EDIN. 1ſt Jan.
1780.

ANDREW DUNCAN.

MEDICAL COMMENTARIES.

SECT. I.

An Account of New Books.

I.

Dissertatio Inauguralis, de Angina Polyposa sive Membranacea, quam Consensu gratiosæ Facultatis Medicæ defendit Christianus Fredericus Michaelis, *Goettingensis.* 12*mo.* Argentorati.

BY the term *Angina polyposa* or *membranacea*, is here meant that disease, which in Britain is now universally known by the name of Croup.

This disorder, it has been commonly supposed, was never, till of late years, either properly understood, or even so much as mentioned in the

the writings of phyſicians. Although late writers, however, and particularly Dr Home, have ſet the doctrine with reſpect to it in a much more diſtinct point of view, yet that it was very well known, and even deſcribed by practitioners at a more early period, our author thinks is exceedingly evident.

Thus Tulpius, he remarks, ſeems to have been well acquainted with it.—After him Bontius, and ſeveral other writers, gave hiſtories of the diſeaſe; and at laſt, about the year 1749, a very accurate account was publiſhed of it by an Italian of the name of Ghiſi, who, in the courſe of his practice, had met with the Croup as an epidemic.

Dr Michaelis, after enumerating the different authors who have wrote upon the diſorder ſince that period, proceeds to give a detail of the different ſymptoms. Having done this in a very accurate manner, he then favours us with the accounts given by various writers, of ſuch appearances as in caſes of Croup have been obſerved on diſſection after death.

In all of theſe, the formation of a preternatural membranaceous ſubſtance in the larynx or trachea was detected; and as from various circumſtances this membrane appears evidently

to

to be of the polypous kind, our author has, from this confideration, we are told, ventured to give the difeafe the defignation he has here applied to it.

There are two fpecies of polypus, our author obferves; in the one, an evident circulation is carried on, as is ufually the cafe in thofe flefhy excrefcences obferved in the nofe and uterus. The other again is perfectly inorganic, examples of which are daily met with in thofe polypous concretions fo frequent in the cavities of the heart and large blood-veffels.

Of this laft fpecies is that tough membranous fubftance, which in cafes of Croup is found to line the trachea; it takes its origin, our author obferves, from an effufion and infpiffation of coagulable lymph, and is not of the mucous kind, as by fome has been afferted. That this is the cafe, he remarks, is evident from the formation of fimilar fubftances in fituations where mucous glands have never been fuppofed to exift; membranes of the very fame nature being frequently obferved on the furface of the pleura, and other vifcera, when in a ftate of inflammation.

By Wilcke and other authors who have wrote on this difeafe, the membrane now under con-

fideration

ſideration has been ſuppoſed to be nothing farther than the natural villous covering of the trachea, ſomewhat altered in its appearance by diſeaſe. The arguments mentioned by our author, in refutation of this opinion, are, that this membrane is commonly found much more firm and thick than it is probable the villous coat of the trachea could ever become. More pain, he thinks, would occur than is ever obſerved in caſes of Croup, if the lining membrane of the trachea was ſo much affected; and he farther remarks, that the natural villous coat of that organ can be diſtinctly obſerved, after this membranous ſubſtance has been ſeparated from it.

Our author now proceeds to the diagnoſis of Croup, and after accurately pointing out the ſeveral ſymptoms by which it may be diſtinguiſhed from other affections of the trachea and adjacent parts, he then goes on to conſider the cauſes and prognoſis of the diſorder. Whatever tends to weaken, and produce any degree of irritation in the lungs, ſo as to occaſion a preternatural ſecretion of fluids into that organ, may in general, we are told, be conſidered as prediſpoſing cauſes of Croup; hence ſuch children as have lately laboured under meaſles, chincough,

chincough, and catarrhal affections, are particularly liable to be seized; and hence low, marshy situations are more especially favourable to its production.

In the treatment of this disorder, blood-letting is recommended as a principal remedy; the quantity to be taken away must be determined by the pulse, age, and habit of the patient, and other similar circumstances.—Although, however, to a certain quantity, especially in the beginning of the disease, blood-letting is always necessary, yet we are cautioned against carrying it very far, so as to debilitate the constitution much, a circumstance which very readily occurs from large evacuations of blood in the advanced stages of the disease.

The application of leeches to the neck is recommended particularly in very young children, with whom they produce, we are told, all the advantages to be obtained from general blood-letting, without being attended with any of its bad consequences.—When leeches cannot be procured, topical scarifications are recommended upon the authority of *Ghisi*.

Gentle laxatives are advised, so far as are necessary for keeping the belly regular; and

considerable

confiderable advantages, we are told, are to be obtained from mild fudorifics, fuch as fpiritus mindereri, and weak folutions of tartar emetic.—In the commencement of the diforder the *pediluvium* is faid to be very ufeful.

Bliſters are here recommended as a very neceffary remedy; they fometimes anfwer the purpofe when applied behind the ears, or to the nape of the neck; but the diforder being feated in the trachea, our author thinks they fhould always be applied to the fore-part of the neck, as near to the feat of the complaint as poffible. With a view to relax and lubricate the parts affected, it has been recommended by *Ghiſi* to fwallow, frequently, fmall quantities of oil of fweet almonds. As aftringents are now known, however, to be more effectual applications than emollients, in every cafe of inflammation, our Author would therefore recommend the frequent ufe of cold water by way of drink, in preference to any kind of oil.

Expectorants, Dr Michaelis obferves, are of two kinds: *viz.* fuch as are taken internally; and thofe which, from their mode of application, may be confidered as external medicines.—Of the former kind are oxymel of fquills, colchicum,

chicum, gum ammoniac, &c. And of the latter are, different kinds of warm vapour, but more particularly that of vinegar, which, by different authors, has been recommended as a moſt effectual expectorant.

Emetics, by emptying the ſtomach of that great quantity of ſordes with which in this diſeaſe it is apt to be overloaded, are frequently of uſe; and inſtances, we are told, have occurred, of the preternatural membrane of the trachea being ſeparated and evacuated by the action of theſe remedies.—It is not, however, till the diſeaſe is ſomewhat advanced, that emetics are here recommended. On the contrary, indeed, we are told, that in the beginning of the diſorder they are apt to do miſchief, by adding to the ſymptoms of inflammation, already perhaps advanced a conſiderable length.

When, notwithſtanding the uſe of emetics, and every other remedy, no relief is obtained, and the diſeaſe ſtill goes on, we are adviſed, as the only mode of cure, to have recourſe to bronchotomy.

The idea of introducing bronchotomy as a remedy in Croup has been ridiculed, our author obſerves, by different writers; but from various

various circumſtances, he is perſuaded, that on many occaſions it might be had recourſe to with advantage.

The danger of wounding the blood-veſſels of the thymus, and of the thyroid gland, has been ſtated as an objection to this operation; but if the operator underſtands rightly the anatomy of the parts, the ſubſtance of theſe glands may be eaſily avoided; and in caſe a blood-veſſel of conſequence ſhould happen to be wounded, the diſcharge of blood may be eaſily ſtopped by the aid of a needle and ligature.

The principal advantage to be obtained from this operation, is the opportunity it would afford for extracting the preternatural membrane of the trachea; and as by diſſection it is commonly found to be very eaſily ſeparated from the internal ſurface of that organ, no great difficulty, our author thinks, would from this circumſtance occur to the operation.

But although one material advantage, to be derived from bronchotomy in theſe inſtances, is the extraction of this membrane, yet on another account, our author remarks, this operation ſhould be always had recourſe to wherever an immediate ſuffocation is to be dreaded. He obſerves,

obſerves, that in many inſtances, it is not the quantity of foreign matter contained in the trachea which produces the ſymptoms of ſuffocation, but merely a ſpaſmodic affection of the parts about the glottis; and when that happens to be the caſe, nothing, he remarks, can ſo probably ſave the life of the patient, as the operation here recommended.

From the uncertainty of ſucceſs from bronchotomy in caſes of croup, and from the tremendous appearance it makes to parents and other relations, it has been ſaid by ſome authors, that if it ever is put in practice, it ſhould be only in the very laſt ſtage of the diſorder. Our author, however, is of a different opinion; and adviſes it to be had recourſe to even early in the diſeaſe, when from the failure of every other remedy, there is reaſon to apprehend any conſiderable degree of danger.

The diſſertation before us, is concluded with an account of various caſes of croup; not only from ſuch authors as have written expreſsly on the diſeaſe, but from the proper experience of our author himſelf, and ſome of his friends; and at the end of all, we are favoured with

different meteorological tables, containing the ſtate of the weather at Goettingen, and other places, at the time the croup happened to prevail there.

II.

Caſes and Remarks in Surgery; to which is ſubjoined, an Appendix, containing the Method of curing the Bronchocele in Coventry.—By B. Wilmer, *Surgeon.* 8vo. London.

THE firſt paper in the collection before us, contains obſervations on ſtrangulated herniæ.

Mr Wilmer having embraced the new doctrine concerning the impropriety of warm applications in caſes of hernia, the intention of this paper is to point out, in all ſuch inſtances, the ſuperior advantages to be obtained from the application of cold; and three caſes are here inſerted, in which the application of cold vinegar to hernial ſwellings, ſeemed to have a conſiderable influence, by affecting the reduction of their contents, when in all probability the operation for the bubonocele would otherwiſe have been neceſſary,

The

The next caſe of importance contains the hiſtory of a patient who died of the hydrocephalus internus; with whom mercury was uſed without producing any good effect. Mr Wilmer was called in about the eighth day of the diſeaſe, and finding the ſymptoms very ſtrongly marked, had immediate recourſe to mercury.—Calomel being given in frequent ſmall doſes, while at the ſame time the mercurial ointment was applied outwardly, a ſalivation was thereby induced in the courſe of twenty-four hours. The diſeaſe, however, continued to gain ground; the patient became daily weaker, and died on the ſeventh day from the commencement of the mercurial courſe.

A young woman, in a fit of deſpondency, having cut her throat, our author was ſent for to her aſſiſtance, when the whole annular ſubſtance of the trachea was found divided juſt beneath the thyroid cartilage; a great deal of blood was loſt, and the patient was totally incapable of ſpeaking.

By two ſtitches of the interrupted ſuture, aſſiſted by ſlips of adheſive plaſter, the ſides of the wound of the integuments were brought into contact. And notwithſtanding the occur-

rence of a troublesome cough, every thing went favourably on till the fourth week, when the external wound being almost healed, the patient was seized with a difficulty of breathing, attended with a sense of suffocation; and after continuance and increase of these symptoms, she died in the space of twenty-four hours from their first appearance.

On dissection after death, the internal wound was found so much contracted that there was merely room for the introduction of a probe, which passed very freely into the trachea, downwards.—The cicatrix adhered firmly to the *inferior* part of the divided trachea, but the superior portion had retracted half an inch, and its cavity was so much filled by granulations of flesh, that there did not appear room for a sufficient quantity of air to pass through it to dilate the lungs; so that when the external wound became so small that the lungs could not be supplied with air from that source, a difficulty of breathing commenced, and at length the patient was suffocated by the very efforts attempted by nature for healing the divided parts.

Some

Some time before this caſe occurred, our author was deſired by Mr Harrold, a neighbouring ſurgeon, to ſee a patient who he had cut into the cavity of the trachea, between the crycoid and thyroid cartilages. In this caſe, as in the preceding, the integuments only were united by ligature; the patient in every reſpect ſeemed to be doing well till the fifth night, when he died ſuddenly.

On examining the body, the immediate cauſe of death appeared to have depended on the rupture of a ſmall artery, the blood from which, not having a ready external paſſage, had found its way into the trachea, and there formed a coagulum, which plugged up the cavity of the windpipe, and ſuffocated the patient, by preventing the acceſs of air into the lungs.—From theſe caſes our author ſtates it as a query, whether the ſewing up the windpipe, and leaving the external wound open, in both or either of them, would have afforded a better chance of recovery.

In the caſe of a woman ſeized with locked jaw and opiſthotonos, as nothing could be got into the ſtomach from a convulſive motion in the muſcles of the thorax being induced by

every attempt to ſwallow, it was thought neceſſary to have recourſe to glyſters, both with a view to the exhibition of medicines and of nouriſhment.

Eight ounces of mutton-broth were injected three times a day, and every eight hours a glyſter, conſiſting of ſix ounces of water, and two drams of laudanum.—The patient remained four days in the ſame ſtate, during which time ſhe did not ſwallow any thing. The quantity of laudanum was increaſed in the glyſters, and the rigid muſcles of the face were well rubbed with camphorated oil.

On the fifth day, ſhe could ſpeak and open her mouth a little; on the ſeventh, ſhe could ſwallow liquids.—She was then directed to take two drams of laudanum three times a day by the mouth.—She every day became better, and in a ſhort time was almoſt as well as uſual; but it was ſix weeks before the muſcles of the neck and back had recovered their proper flexibility.

Sir John Pringle having, in his Treatiſe on Diſeaſes of the Army, recommended the application of bliſters to the pained part of the abdomen, in caſes of ileus, our author was thereby induced to make trial of their effects in that

diſorder.

disorder. Three cases of this nature are here related, in which blisters proved effectual after all the ordinary remedies had been had recourse to in vain. We shall here give a more particular account of one of them.

On the third of February 1774, Mr Wilmer was desired to see a young man who for two days had been attended by an apothecary. The symptoms were, a constant and acute pain below the navel, continual vomiting, hiccough, languid pulse, costiveness, and a cadaverous countenance. He had been bled repeatedly; glysters, fomentations, opiates, and a variety of solutive medicines, had been administered, but all without any kind of relief.

A large blistering plaster, with a perforation in its centre, was now ordered to be applied round the navel, and no medicines were then prescribed, that the result might be more certainly known.

Soon after the patient felt any pain from the blister, he enquired for the close-stool, and had an evacuation, by which he was much relieved. The pain of the abdomen gradually abated, and in a few days he was restored to health. The effects of blisters in the other two cases related

by our author were equally remarkable with the above. After having given ſome remarks upon the treatment of compound fractures and diſlocations, our author concludes the publication with an account of the method of curing the bronchocele, as practiſed at Coventry.

The bronchocele, he obſerves, is a preternatural enlargement of the thyroid gland; and as from different circumſtances every attempt to extirpate tumours of this nature muſt be hazardous, the cure, he thinks, can only be expected from the uſe of internal medicines, no topical application being ſufficiently active for producing reſolution.

The medicine which at Coventry has acquired ſo much reputation for the cure of this diſeaſe, owes its origin, we are here informed, to Doctor Bate, who, a conſiderable time ago, practiſed as phyſician at that place. As Mr Wilmer vouches for the effects of the remedy at leaſt in young female patients, we ſhall here give our readers his account of it at ſome length. In men, and in all patients paſt the meridian of life, ſuch effects, he obſerves, are not to be expected from it, as when young women are the ſubjects of the diſeaſe.

There

There are two receipts by which the medicine is prepared; one of them is for certain the original prescription of Doctor Bate. Which of the two came from him, however, our author cannot determine; but they are both, he remarks, equally efficacious. The following are the contents of each:

Number I.

The day after the moon hath been in the full, the patient is to take a vomit—on the succeeding day, a purge is to be administered—on the third night, at going to bed, one of the following boluses is to be placed in the mouth, under the tongue, and, being suffered to dissolve gradually, is to be swallowed. This bolus is to be repeated the six succeeding nights.

Take Calcined spunge
Cork calcined
Pumice-stone burnt, of each ten grains.

To be separately powdered, and made into a bolus with syrup, honey, or mucilage.

On each of the seven days that the patient takes the preceding bolus, the following powder is to be administered in the forenoon in any proper vehicle.

℞. Flor.

℞. Flor. cham. pulv.
Rad. gentian. pulv.
Sum. centaur. min. pulv. aa gr. v. m.

On the eighth day the purge is to be repeated. In the wane of the ſucceeding moon the ſame proceſs is to be entered into, and repeated a third time, unleſs the diſeaſe be cured before.—The vomit is only to be taken before the firſt courſe of medicines.

NUMBER II.

℞. Spongiæ calcinatæ dr. ſſ.
Mellis q. ſ. pro bolo.

The PREPARATION.

Tie the beſt ſpunge up hard with wet packthread, and calcine it in a crucible. Theſe boles are to be uſed as thoſe of the former receipt; the bitter powders are to be taken, and the ſame directions with regard to evacuations obſerved in every reſpect as in No. I.

A very eminent ſurgeon, who has had many opportunities of ſeeing the good effects of both theſe preparations, aſſures our author, that either of them will ſucceed with more certainty if

if the patient takes a vomit and purge during the *increaſe* of the moon.

The calcined ſpunge for either of theſe preparations ought to be powdered in a glaſs or marble mortar. If a braſs one is uſed, the ſalts of the ſpunge attract ſo much of the metal as to acquire an emetic property.

III.

A Medical Commentary on Fixed Air. By Matthew Dobſon, M. D. F. R. S. Cheſter. 8vo.

THE ſubject here treated of by our ingenious author, we find divided into ten different ſections.

Sect. I. Contains obſervations on the different methods of procuring and adminiſtering fixed air.

II. On its ſenſible effects in health taken internally.

III. On its effects in diſeaſes of the putrid claſs.

IV. On putrefaction, the putrid effluvium, and the means of correcting the putrid effluvium.

V. On

V. On the effects of fixed air, on the putrefactive process, and on the putrid effluvium.

VI. On the use of fixed air in cachexies and phagedenic ulcers.

VII. In some diseases of the stomach.

VIII. In the stone and gravel.

IX. On the disposition to the stone in the cyder counties, compared with some other parts of England.

X. On the noxious effects of fixed air.

Dr Dobson, after enumerating the various methods suggested by different writers for procuring and administering fixed air, concludes the first section with some experiments for determining the different proportions of air contained in chalk, and in the fixed and volatile alkalies; these being the substances most commonly directed for the supply of fixed air.

EXPERIMENT I.

Two drams of powdered and well dried chalk were put into a twenty ounce phial, and to this were added three ounces of water: the phial, chalk, and water, weighed exactly nine ounces,

ounces, fix drams, and one fcruple.—As much of the acid of vitriol, diluted with water, was then added, as was fufficient to feparate the whole of the fixed air from the chalk, which was effected by one ounce, one fcruple, and twelve grains of the diluted acid.—The phial, with its contents, now weighed ten ounces, fix drams, and ten grains.—Two fcruples therefore, and two grains of fixed air, had been feparated from this quantity of chalk by the addition of the acid.

Experiment II.

Two drams of the dry and pure falt of tartar, managed as in the preceding Experiment, yielded one fcruple and eight grains of fixed air.—The refult of this experiment correfponds, our author obferves, with a fimilar one made by Dr Black, as related in the fecond volume of the Phyfical and Literary Effays of Edinburgh.

Experiment III.

Two drams of volatile fal ammoniac, carefully treated as in the firft Experiment, gave out two fcruples and eight grains of fixed air.

It

It appears, therefore, from theſe Experiments, that two drams of each of theſe ſubſtances contain the following proportions of fixed air:

Volatile ſal ammoniac	-	48 grains.
Chalk	- -	42 grains.
Salt of tartar	- -	28 grains.

In the above Experiments, ſome ſmall portion of water, or other heterogeneous matter, might have ariſen together with the fixed air, had not care been taken to prevent it, by uſing a very tall phial, which was kept ſlightly corked during the effervesſcence.

In Section ſecond, our author remarks, that pyrmont, and other mineral waters, ſtrongly impregnated with fixed air, when drank in their full vigour as immediately drawn from the ſpring, have a very ſenſible effect on the brain and nervous ſyſtem. They raiſe the ſpirits, diffuſe an agreeable glow through the whole body, quicken the pulſe, and often excite a vertigo and temporary intoxication.

To determine whether fixed air, as procured by art for medicinal purpoſes, produces ſimilar effects, different experiments were tried; and the

the effects obferved to refult from it were exactly fuch as thofe found to proceed from the internal ufe of pyrmont and other waters of the fame nature.

In the third Section, we are favoured with obfervations on the effects of fixed air in difeafes of the putrid clafs.

Four cafes of putrid fever are related, in which the internal exhibition of fixed air produced, in a very fhort fpace of time, the removal of very alarming fymptoms; and in all of them complete cures were at laft effected. The medicine was here conveyed to the ftomach by a frequent repetition of faline draughts in the ftate of effervefcence; a more expeditious mode of applying it, our author remarks, than in the form of glyfters.

In the fecondary fever of the fmall pox, which is often accompanied with fymptoms of the putrid kind, fixed air is recommended as a medicine of fingular efficacy; and we are here favoured with a cafe of this kind, felected, we are told, from a number of others, in which fixed air was given with advantage.

Three other cafes of this nature are afterwards related; two of which were communi-

cated

cated by Dr Haygarth, and the other by Mr Sandback, in which ſome very putrid ſymptoms appeared in the confluent ſmall-pox; which were effectually checked by the internal exhibition of fixed air.

In a caſe of gangrene of the leg and thigh, communicated by Dr Percival, fixed air given internally, was the apparent means of a cure being obtained. We are afterwards favoured with ſome remarks on the utility of the ſame remedy in the putrid ulcerous ſore throat.

In caſes of pulmonary conſumptions, our author acknowledges that he never met with a ſingle inſtance in which the patient recoverd by the uſe of this remedy. But in caſes of abſceſs in the lungs, whether from peripneumony or accidental injury, he has known very ſalutary effects produced by it; and two caſes of this nature are here related, in which all the ſymptoms had become very alarming, and which were both cured by the inſpiration of fixed air, from an effervefcing mixture together with the internal exhibition of ſaline effervefcing draughts.

Our author, when ſpeaking of the effects of fixed air in caſes of ſea-ſcurvy, ſays, that many

many ſeamen affected with this diſorder, on coming into port, have fallen under his care, and have been cured by the effervefcing draughts; or by proper doſes of Mr Bewly's mephitic julep waſhed down with lemonade.

In Section fourth, we are favoured with ſeveral ingenious remarks on putrefaction, the putrid effluvium, and on the means of correcting the putrid effluvium. And in the fifth Section are related, ſome experiments for determining the effects of fixed air on the putrefactive proceſs, and on the putrid effluvium.

From theſe experiments Dr Dobſon concludes, that a diſtinction ought to be made between putrefaction and the product of putrefaction; and that fixed air checks, or puts a ſtop to the putrefactive fermentation, but does not meliorate or ſweeten the putrid effluvium, the product of putrefaction.—Hence we ſee, ſays the Doctor, why lime-kilns in the neighbourhood of populous cities, or large veſſels of fermenting liquors placed in rooms filled with noxious air, can have no effect in meliorating this, unleſs the fixed air which is thrown out come in contact with the putrefying body. It

may then indeed, he remarks, check the putrid fermentation, and thus be of uſe by cutting off the ſource whence the putrid effluvium is derived.

In Section ſixth, where our author treats of the uſe of fixed air in cachexies and phagedenic ulcers, he remarks, that in genuine and confirmed cancers he never found any ſenſible progreſs towards a cure, or any conſiderable benefit, farther than a mitigation of the pain, from the uſe of this remedy. But in old, ſpreading, ill-conditioned ulcers, he has employed it with obvious advantage.—In many inſtances it has relieved the pain, brought on a more favourable digeſtion, and, in ſome, it has effected a complete cure.

From conſidering fixed air both as a tonic and as a corrector of acrimony, Dr Dobſon was induced to give it to ſeveral ſcrophulous patients. In ſome it afforded ſenſible relief, but in none did it ever effect a cure. In other cachexies, however, he remarks, it has been more ſucceſsfully adminiſtered; and in confirmation of this, two caſes are here related: one of an obſtinate jaundice, and the other of a

tedious

tedious eruption upon the ſkin; in both of which, complete cures were obtained by the internal exhibition of fixed air.

In Section ſeventh, we are favoured with ſeveral caſes of diſorders of the ſtomach, in which the uſe of fixed air was attended with very evident advantages. In caſes of debility and morbid irritability of the ſtomach, fixed air given in the form of efferveſcing draughts, produced the ſame good effects as are uſually obtained in ſuch diſorders from mineral waters containing fixed air.

In Section eighth, which contains remarks on the uſe of fixed air in the ſtone and gravel, Dr Dobſon obſerves, that the uſe of this remedy in theſe diſorders, was firſt ſuggeſted, by its having been proved by the Hon. Henry Cavendiſh, that calcareous earths are made ſoluble in water, by being united with more than their natural proportion of fixed air.

This fact, with reſpect to the ſolubility of calcareous earths in fluids impregnated with fixed air, being properly aſcertained, the next point to be determined was, whether this fluid may be tranſmitted by the courſe of the circulation, ſo as to enter the bladder unchanged,

 and

and whether the urine would be thus ſufficiently medicated with fixed air.

That the fixed air of fluids taken into the ſtomach paſſes in the courſe of circulation into the bladder, is now, our author remarks, pretty clearly demonſtrated; Dr Prieſtly having more than once expelled from a quantity of freſh made urine, by means of heat, more than one-fifth of its bulk of pure fixed air. The obſervations too of practical writers concerning the efficacy of thoſe mineral waters, malt-liquor, and other fluids which contain great proportions of fixed air, in calculous caſes, is a farther argument, he thinks, in favour of this doctrine.

After enumerating a variety of facts in favour of fixed air, as a preſervative, a palliative, or a ſolvent of the ſtone, Dr Dobſon briefly mentions the reſult of his own experience, concerning the uſe of this fluid in diſeaſes of the urinary paſſages in general, whether gravel, ſtone, abſceſs, or eroſion.

In two caſes of abſceſs in the kidney, accompanied with great pain, hectic fever, waſting, and diſcharge of pus, the good effects of fixed

air

air were evident in alleviating the pains, abating the hectic, and forwarding the cure. In ſome few inſtances of eroſion, he has likewiſe experienced very good effects from fixed air. In the gravel he has met with many proofs of its efficacy. But with reſpect to the ſtone, he has had very little, and he has not had any deciſive experience of the effects of fixed air in that diſorder. It may be aſked, he ſays, whether any one caſe has yet occurred, in which a ſtone in the bladder has been totally diſſolved by the effects of this remedy ? No ſuch caſe, our author apprehends, has hitherto occurred; the noted patient of Dr Hulme, whoſe ſtone was ſuppoſed to have been diſſolved, being lately dead, when, on diſſection, a great many *ſmall calculi* were found in the bladder, with ſeveral others broken into very ſmall fragments. Theſe calculi having all rough ſurfaces, with various ridges, or eminent lines, running upon them, made it ſuppoſed indeed that a partial ſolution had begun to take place. The immediate cauſe of this patient's death, we are informed, was found to be an obſtruction formed by an enlargement of the proſtate gland.

With reſpect to the method of adminiſtering fixed air in caſes of gravel, our author does not approve ſo much of injecting it into the bladder, as throwing it into the general maſs of blood, by means of draughts taken into the ſtomach in the ſtate of effervefcence. By ſuch draughts being frequently exhibited, while at the ſame time the patient's common drink is ordered to be mephitic water, wort ſweetened with honey, mead, or ſound malt-liquor, the urine, we are told, may be well impregnated with a conſtant and copious ſupply of fixed air. An impregnation will thus be obtained even to a higher degree, our author ſuppoſes, than by immediately injecting the mephitic water into the bladder.

In Section ninth, which contains remarks on the diſpoſition to the ſtone in the cyder countries, compared with ſome other parts of England, Dr Dobſon endeavours to aſcertain this point by comparing the number of patients cut for the ſtone in the different hoſpitals of the diſtricts to which he applied for information, with the whole number of both in and out patients. We cannot here pretend to give the particular

report from every hoſpital as related by Dr Dobſon; but the following general concluſion will convey to our readers a tolerably exact idea of our author's intelligence upon this point. In the Glouceſter, Worceſter, Hereford, and Exeter hoſpitals, 121 patients have been cut for the ſtone out of 47,646, or 1 in 394. The report of the north-eaſt part of England, including the hoſpitals of Newcaſtle, York, Leeds and Mancheſter, ſhows, that 228 have been cut out of 95,770 patients, or 1 in 420. The report of the north-weſt part of England, comprehending the hoſpitals of Liverpool, Cheſter, Shrewſbury, and the whole of North Wales, mentions only 16 patients who have undergone the operation out of 51,574, or 1 in 3,223. The ſtone therefore is a more common diſeaſe, our author concludes, in the cyder diſtrict, than in North Wales and the North of England. And this inquiry, he obſerves, confirms the general opinion, that thoſe liquors which are hard, and contain a crude acid, are prejudicial to conſtitutions which have a diſpoſition to the ſtone; the cyder drank by the poorer people in the cyder countries being weak,

 and

and containing little fixed air, but a large proportion of crude acid, the product of a partial acetous fermentation.

From the ſtone being a diſeaſe which prevails much more in certain diſtricts than in others, and from our not being able to account for this by any circumſtance hitherto diſcovered reſpecting either food, drink, or ſituation, our author thinks, that it may ſometimes be conſidered as a diſeaſe of the conſtitution, being rather an animal production than proceeding from ſtony matter introduced *ab extra*, and afterwards collected and concreted in the kidneys and bladder; and this opinion he very ingeniouſly ſupports by a number of arguments both from facts and analogy.

In the tenth and laſt Section, which treats of the noxious effects of fixed air, Dr Dobſon endeavours to ſupport and corroborate an opinion he ſome time ago advanced, with reſpect to the cauſe of death in ſuch animals as are killed by the air in the Grotto di Cani, in the caverns of Schwalbach and Pyrmont, or by the vapours of burning charcoal. In ſuch inſtances it has been the opinion of Hoffman, Hales, Morgagni and

and others, that death is produced by ſuffocation; but Dr Dobſon ſuppoſes, that it rather occurs from the vital principle itſelf being immediately extinguiſhed by the action of theſe vapours on the brain and nervous ſyſtem. Suffocation, or the taking away life by a ſtoppage of reſpiration, is not, he obſerves, an inſtantaneous, but a gradual proceſs; whereas in thoſe animals which are killed by being immerſed in fixed air, death is immediate and without ſtruggle. Even flies and other inſects which have no lungs, and conſequently cannot ſuffer by ſuffocation, inſtantly drop down motionleſs. Two inſtances are afterwards related, of the fatal effects produced upon animal life by that ſpecies of fixed air which is continually emitted in large quantities from lime-kilns.

IV.

Dissertatio Medica Inauguralis de Chirurgia Infusoria renovanda.—Auctore Joanne Maria Regnaudot. 8*vo*. Lugduni Batavorum.

BY the term *chirurgia infusoria* is here meant that operation by which different kinds of liquids may be thrown immediately into the course of circulation, by being injected at an orifice made in a vein. By this operation, which was first put in practice about the middle of the last century, it was expected by practitioners, that as the different articles made use of would in this way be brought more quickly into the course of circulation, so their effects would be more immediate and active. But this new innovation in practice not being carried on with sufficient prudence and caution, and disagreeable consequences having occurred from it, it was accordingly in a short time after its introduction laid entirely aside.

Dr Regnaudot, after enumerating a number of authors who have written upon this subject, and having mentioned the different substances that were commonly used for injecting, proceeds

to

to recapitulate ſome experiments inſtituted by himſelf.

A man in the iſland of Guadaloupe, aged about eighteen or twenty years, who had a long time laboured under that ſpecies of *herpes* termed by the natives *dartres rouges*, and which is always a certain forerunner of *lepra*, at laſt applied to our author for his aſſiſtance.

Every remedy which had been tried having produced no good effect, and the poor man being, from the nature of his diſorder, almoſt entirely ſecluded from every intercourſe with other people, our author was thereby induced to make trial of the practice now under conſideration.

Experiment I.

On the 27th January 1770, half a ſpoonful of a weak infuſion of ſenna leaves was injected at an opening made in the Median vein of the left arm.—No other inconvenience was perceived to enſue than a ſlight headach.

The quantity of infuſion here injected was intended to have been more conſiderable; but this we are informed was prevented by the riſing

of

of a ſmall thrombus or tumour round the orifice in the vein.

EXPERIMENT II.

January 28th; about an ounce of the ſame infuſion was this day injected.—In the ſpace of half an hour or thereby, the patient was ſeized with a violent ſhivering and frequent vomitings. To theſe ſucceeded heat, frequent ſtools, and the feveriſh fit continued a conſiderable part of the day.

EXPERIMENT III.

Three ounces of an infuſion containing two drams of *lignum guaiaci* and two ſcruples of *ichthyocolla*, were injected a little before eight in the morning on the 29th of January. At this time the pulſe was natural, and the ſkin ſoft. In the ſpace of half an hour, the patient was ſeized with a violent ſhivering, ſevere gripes, had two ſtools, and the feveriſh fit continued till five o'clock in the evening.

EXPERIMENT IV.

As the acrimony of the liquors injected in the preceding experiments might be ſuppoſed to be in ſome meaſure the cauſe of the febrile ſymp-

toms,

toms, a ſolution of a milder nature was therefore made the ſubject of the preſent trial.— Two drams of gum arabic being diſſolved in three ounces of water, the ſolution was injected at eight o'clock in the morning. About nine o'clock the ſhivering commenced, and the pulſe became ſmall and extremely frequent. The fever continued a conſiderable part of the following night; the patient had three ſtools; the heat was not ſo intenſe as in the preceding experiments, but the ſweat which ſucceeded was exceedingly copious.

The ſucceſs from theſe trials, in removing the patient's diſorder, being very uncertain, while, on the contrary, the inconveniencies produced by them were conſiderable; our author was thereby prevented from any further proſecution of the experiments. The concluſions, however, which he forms from theſe above related are very ingenious, and we ſhall here preſent our readers with ſome of them.

1ſt, Theſe experiments, our author thinks, clearly prove, that irritation may be produced in the heart, and even large blood-veſſels, by the introduction of an heterogeneous matter to the general maſs of blood.

2d,

2d, They likewife fhew, that a febrile paroxyfm may thereby be raifed at pleafure.

3d, That fuch febrile affections may be induced with equal certainty, by the introduction of the blandeft materials, as by thofe of a much more ftimulating nature; as particularly appears from the laft experiment, with a folution of gum arabic.

4th, That every injection, however mild, will act as a purgative.

5th, That every fpecies of purgative ufed in this way, will act as an emetic. This conclufion, he obferves, is confirmed by different experiments of this kind, recorded in fome papers in the Philofophical Tranfactions, and other publications on this fubject.

6th, That the fpace of half an hour is required, for the production of fuch fymptoms as arife from remedies ufed in this manner.

The heart our author confiders as an organ of fenfe, equally diftinct and certain as thofe of fight and hearing; and upon this principle he accounts for and explains all the preceding conclufions.

The blood being deftined by nature as a ftimulus to the heart, it follows therefore, our author

author remarks, that a certain harmony or ſympathy muſt ſubſiſt between the heart as the ſentient organ, and the blood as the acting principle. So long as this natural harmony ſubſiſts between the blood and its ſenſorium, ſo long will the former produce that degree of irritability in the latter, which is neceſſary for the production of that equable and moderate re-action requiſite for carrying on the circulation of the blood in a ſtate of health. But whenever any heterogeneous matter is introduced to the circulation, whether by a depraved digeſtion, by abſorption of morbid miaſmata, or by a retention of ſuch excrementitious parts of the blood as ought to have been diſcharged; in any of theſe caſes, the blood becomes ſo changed and corrupted as to prevent its acting as a proper ſtimulus to the heart.

That organ being now acted upon by a more powerful ſtimulating matter than by nature it was accuſtomed to, is accordingly thrown into more frequent, ſtrong, and irregular degrees of re-action. And hence, our author remarks, may be accounted for, thoſe ſhiverings, palpitations, and other febrile ſymptoms, which in ſuch caſes univerſally enſue. In the ſame manner,

ner, all the ſymptoms of a temporary fever are produced by the injection of any heterogeneous fluid, proceeding, he ſuppoſes, from their acting as ſtimulants to the heart and larger blood-veſſels. On this principle may be explained all the phænomena obſerved to occur from the practice, and in no other way does he think they could be accounted for.

From theſe injections acting as ſuch powerful ſtimulants to the heart, ſome advantages, our author thinks, might be derived from them, in thoſe caſes eſpecially where a ſudden excitement is wiſhed for.

In caſes of aſphyxia, whether produced by the imprudent application of mephitic vapours, or by any other cauſe, this ſpecies of ſtimulus, our author thinks, will probably be found more effectual than all the ordinary remedies uſually had recourſe to.—In ſuch inſtances, either warm water by itſelf, or mixed with a few drops either of volatile alkali, or of wine, is recommended as the beſt ſpecies of injection. The ſame remedy, from its ſtimulating properties, is alſo adviſed to be employed in comatoſe affections, and likewiſe in caſes of catarrhous ſuffocations. Independently of the utility to be derived

derived from this practice, by the ſtimulating powers of ſuch injections, other advantages, our author thinks, may likewiſe be expected from them.

Thus, in caſes of ſcurvy, where the uſual remedies might, in the common method of exhibiting them, be conſiderably altered in their properties before reaching the courſe of circulation, by throwing them directly into the maſs of blood, their effects, he thinks, will not only be more certain, but much more expeditious, than when firſt taken into the ſtomach; and thus a very ſmall quantity of any of the antiſcorbutic juices, injected either by itſelf, or properly diluted, may probably prove more effectual in obtaining a cure, than much larger quantities taken in the ordinary way. By injecting only ſmall quantities of theſe remedies at once, their ſtimulating effects, we are told, will be entirely prevented, as is rendered probable indeed by the effects of Experiment 1ſt.

In jaundice, and every other ſpecies of cachexy, the ſame kind of remedy may probably, our author thinks, be employed with advantage.

V.

Frid. Forkenbeck *Dissertatio, inquirens Causam perfectæ Depletionis Vasorum in Cadavere detectæ. 8vo.* Harderovici.

BY way of Preface to the Treatise before us, and as a confirmation of the fact with respect to the depletion of the larger blood-vessels after death, our author favours us with the history of a case taken from the Ratio Medendi of Dr Haen, in which, upon dissection, the blood-vessels were found altogether flaccid and empty; no blood whatever being observable either in the arteries or veins.

It was remarkable here too, that the patient was not much debilitated by a tedious illness; five hours only before death, the pulse having been quick, full, and hard; and some blood taken away about that time having evidently an inflammatory appearance.

An empty state of the veins after death has not been usually observed. But the arteries have been so universally found in this condition, that from this circumstance we must account for the supposition of the ancients, with respect to arteries, even during life, being filled merely with air.

air. But although the veins are not in general found empty after death, yet inftances have occurred of their being fo, as was particularly remarkable in the cafe related by De Haen; and it always happens, our author obferves, that the veins, on diffection, are found flaccid and lefs turgid than during life.

The caufe commonly affigned for this flaccidity and empty ftate of the arteries after death, is, that their contractile power pufhes forward their contents into the correfponding veins: This, our author remarks, might account fufficiently for the phænomenon with refpect to the arterial fyftem; but does not in any refpect explain the appearance when found to occur in the veins; and he is led to fuppofe, that a very different caufe from any hitherto advanced, will, on examination, be found to be the true one, both with refpect to the arteries and veins.

Although the power of contraction in the fmall capillary blood-veffels is not perhaps confiderable, yet, that they do to a certain degree enjoy fuch a power, is evident from various circumftances; and particularly, our author remarks, from the effects of pain, fear, &c. upon the veffels on the furface. Thefe, ac-

cording to Sanctorius, and others, tend always to diminiſh conſiderably the quantity of inſenſible perſpiration.

Having endeavoured to eſtabliſh the fact with reſpect to this contractile power of capillary veſſels, our author then proceeds to ſhew, that the diameters of theſe veſſels muſt after death be conſiderably increaſed, in conſequence of that univerſal relaxation always obſerved to occur on the approach of death.

By ſuch a relaxation through all the capillary ſyſtem, a conſiderable addition, he ſuppoſes, muſt be made to the capacities of theſe veſſels, which will enable them to contain, if not all, at leaſt the greateſt part of the whole maſs of blood; and in this manner, in the dead body, he thinks, all that part of the blood is diſpoſed of, with which, during life, the larger arteries and veins are known to be filled.

This opinion, our author ſuppoſes, might, *a priori*, perhaps be doubted; but the fact, he thinks, is rendered certain by the reſult of the following Experiment.

A piece of fleſh, weighing five pounds, taken from an animal newly killed, was toaſted till it was almoſt dry. Then there was found to remain

main only one pound ; ſo that here four pounds of fluids were evaporated, which, in the piece of fleſh, had adhered to the capillary veſſels ; and from hence, our author obſerves, the opinion in queſtion is not only corroborated, but from this Experiment it appears too, that in the human body there are at leaſt four parts fluid, to one of ſolid matter.

It may perhaps be objected, he ſuppoſes, to the theory here advanced, that the ſame cauſe which produces an empty ſtate of the larger arteries after death, ſhould have the ſame effect upon the veins likewiſe. But the veins being almoſt every where furniſhed with valves, which during life effectually prevent a retrograde motion of the blood, the ſame cauſe, he thinks, may, even after death, ſerve to prevent the return of the blood into the ſmaller capillaries. When the blood indeed happens to be in a thin diſſolved ſtate, a conſiderable part of it may probably, he ſuppoſes, fall back into the ſmaller ſet of veſſels ; and in ſuch inſtances, the large veins, as well as the arteries, will all be found empty, as occurred in the caſe quoted from De Haen.

The blood taken from De Haen's patient immediately before death, having had the buffy coat together with other appearances of inflammation, is no objection, our author remarks, to this fuppofition, of its having been in a diffolved ftate. For the appearance of blood, on being drawn either from an artery or a vein, is fo eafily affected by various trivial caufes, that no juft conclufion, he thinks, can be drawn from this circumftance, either for or againft the argument in queftion.

VI.

Jo. Ern. Theoph. Guerick *Differtatio de Sulphure Antimonii aurato liquido.* 8*vo.* Erfurti.

THE author of this Differtation does not pretend that he is the difcoverer of the remedy here treated of; this he candidly attributes to its real inventor, Dr Chriftianus Jacobus, a celebrated German phyfician and chemift. The intention of the prefent publication is merely to make more generally known a medicine, which he confiders to be of very great importance.

The common fulphur auratum antimonii of the fhops, and likewife the kermes minerale, have

have long, our author remarks, been juſtly eſteemed as the moſt effectual preparations of antimony. But a continued uſe of theſe remedies being frequently productive of troubleſome affections of the ſtomach, a medicine deſtitute of the acrimony of either of theſe, and at the ſame time poſſeſſed of all their influence, was therefore much wanted; and this, we are informed, is now diſcovered in the remedy under conſideration. The following is recommended by Dr Jacobus as the beſt way of preparing the medicine.

Take any quantity of the ordinary ſulphur of antimony diſſolved in the uſual alkaline lixivium, let one half of it be evaporated to ſuch a conſiſtence that an egg may ſwim in it; and an equal quantity of the expreſſed oil of poppies or of almonds being then added to it, the whole is to be well mixed and gently boiled till the oil be no longer perceptible; and the other half of the lixivium being then added by degrees, the boiling is to be continued till the acrimony of the alkali is alſo deſtroyed.

The maſs being now of nearly the conſiſtence of a poultice, is to be put into a receiver, and being covered with alcohol to the depth of five

inches, the mixture is then to be ſet to digeſt for the ſpace of two days. At the end of that time, a conſiderable quantity of watery fluid will be found at the bottom of the receiver; and the maſs ſwimming in it being taken out, is to be dried to the conſiſtence and firmneſs of common ſoap.

The ſulphur auratum antimonii being thus converted into a ſoap, is in this form to be kept for uſe, and part of it may at any time be converted into a liquid by being diſſolved in ſpirit of wine, which proves for this article a very complete menſtruum.

This medicine, independently of its containing the ſulphur of antimony in greater quantity than any other liquid hitherto diſcovered, is perfectly deſtitute of that diſagreeable nauſeous flavour ſo univerſally obſerved in every other preparation of this nature; and the acrimony of the remedy being effectually deſtroyed by the oil with which it is combined, it is thereby prevented, as was already remarked, from producing any improper effects upon the ſtomach, while, at the ſame time, all its influence on the conſtitution is preſerved, as a preparation of antimony.

As

As a proof of this, various diſorders are enumerated, in which this remedy has been found effectual after every other medicine had been tried in vain; and, among others, a caſe of obſtinate lepra is mentioned, in which a complete cure was obtained by it in the ſpace of two months, after mercury, æthiops antimonii, and even Plummer's powder, had been uſed without any ſucceſs. In this caſe, five grains of the ſoap, in the form of pills, were given morning and evening; at the ſame time that forty drops of the tincture were exhibited twice a-day, in a decoction of juniper-root. In obſtinate caſes of chronic rheumatiſm, this remedy, we are told, is remarkably efficacious; our author himſelf having in ſeveral inſtances ſeen it uſed with advantage. It is likewiſe recommended in every caſe of lepra, ſcabies, tinea capitis, and in all chronic exanthematous diſorders.

In caſes of chronic aſthma it is ſaid to be particularly ſerviceable; and likewiſe in dropſical affections, whether of the whole habit, of the breaſt, or abdomen. Our author mentions ſeveral remarkable cures performed by it in caſes of dropſy.

In

In cafes of fluor albus, and of gonorrhœa, whether from a venereal taint or any other caufe, this liquid preparation of antimony is recommended as being frequently an ufeful remedy. In hemicrania too, we are told, it has been ufed with advantage.

This remedy, however, fhould never be had recourfe to, Dr Guerick remarks, where there is reafon to fufpect vomica, or any internal ulceration; nor fhould it ever be ufed where fymptoms of hectic fever are obfervable. He gives, as a general caution, directions for emptying the blood-veffels in every cafe of plethora, before this medicine be exhibited: and he defires too, that whenever the ftomach and bowels are in any degree affected, they may be previoufly cleanfed of all their improper contents.

VII.

Practical Obſervations on the Treatment of Conſumptions. *By* Samuel Foart Simmons, M. D. *Member of the Royal College of Phyſicians,* London, *and* F. R. S. 8*vo.* London.

THE frequency and fatality of pulmonary complaints in this country are ſo well known, and have been ſo often lamented, that every well-meant endeavour to improve the method of treating them cannot fail of meeting with a candid reception from the public.

The author of the work before us, who is already well known by ſeveral other valuable productions, does not profeſs to give a ſyſtematic treatiſe on the ſubject; but, as he informs us in the preface, has confined himſelf to a few obſervations on the remedies that have hitherto been the moſt commonly employed; together with ſuch other remarks as have occurred to him in the courſe of his practice.

Dr Simmons dwells chiefly on the treatment of that ſpecies of genuine phthiſis which has its origin from tubercles; his firſt ſection therefore contains

contains ſome account of theſe concretions. In the ſecond ſection, the author deſcribes the ſymptoms and progreſs of the diſeaſe, together with the methods of treating it. To the marks of a prediſpoſition to phthiſis, which are commonly to be met with in authors, Dr Simmons has added the following, *viz.* ſound teeth, which, as the diſeaſe advances, uſually become of a milky white colour, and more or leſs tranſparent. Dr Simmons obſerves, that this circumſtance was firſt communicated to him by the learned Profeſſor Camper, when he viſited him in Weſt Frieſland. Profeſſor Camper ſuppoſes it to attend every ſpecies of pulmonary conſumption; but from repeated and attentive obſervations, Dr Simmons is induced to be of opinion, that it is the diſtinguiſhing characteriſtic of a genuine phthiſis from tubercles, or of a prediſpoſition to it. He remarks, that of thoſe who are carried off by this diſeaſe, the greater number will be found never to have had a carious tooth.

In ſpeaking of the different ſpecies of cough which precede phthiſis, he notices that which begins in the form of catarrh, and likewiſe that which is occaſioned by an immediate inflammation

tion of ſome parts of the lungs. He lays down the beſt method of treating each of theſe; after which, he obſerves, that a ſymptomatic cough, which has its riſe, not from catarrh, or from an immediate inflammation of the lungs, but from their ſympathy with the ſtomach, has ſometimes laid the foundation of phthiſis, from its having been miſtaken, and of courſe improperly treated. This complaint is ſo far from being relieved by bleeding, that it conſtantly grows worſe after it. The oily remedies likewiſe ſerve only to exaſperate it; but it ſeldom fails to give way to one or two gentle pukes, and the occaſional uſe of mild purges.

Our author then proceeds to delineate the progreſs of the diſeaſe through what he ſtiles the inflammatory and ſuppurative ſtages of it. He obſerves, that the hectic fever which accompanies this and ſome other chronic diſeaſes, is evidently the effect of acrimony, and moſt commonly of pus abſorbed and carried into the circulation. The nature of this acrimony, and the different irritability of different patients, we are told, are probably the ſources of the variety we obſerve in fevers of this denomination. In the advanced ſtage of the diſeaſe, he ſuppoſes the

the fever induced to be truly of the putrid kind, it having been well denominated *febris hectica putrida* by the judicious Morton, who considers it as being conbined with a peripneumonic or inflammatory fever, which recurs as often as fresh tubercles begin to inflame. For although our author has named one period of the disease the inflammatory, and another the suppurative period, yet he does not mean that the latter is exempt from inflammation; because, while matter is poured into the bronchiæ, or absorbed and carried into the system from one part of the lungs, other parts are in a crude state of inflammation, or advancing towards suppuration; a circumstance which easily accounts for the occasional combination of inflammatory symptoms with those of the putrid hectic.

Dr Simmons observes, that in the different periods of the disease, the curative indications are sufficiently obvious; that to prevent the formation of fresh tubercles, to obviate the inflammation of those already formed, to promote their resolution, to allay morbid irritability, the cough, and other troublesome symptoms, and, above all, to check the tendency to hectic, are the views that every rational physician proposes

to

to himſelf in the treatment of genuine conſumption. He then goes on to point out how theſe indications are to be accompliſhed. He obſerves, that we know of no medicines which can exert their ſpecific effects upon the lungs by diſſolving tuberculous concretions; and that it is not probable, from what we know of the animal œconomy, that any ſuch will ever be diſcovered. He is of opinion, however, that medicines which operate in a general manner upon the ſyſtem, may, by promoting abſorption, and diminiſhing the determination to the lungs, tend to diſperſe tubercles, or to prevent their formation. He thinks, that the moſt formidable effects of ulcerated lungs, are the abſorption and conſequent hectic. So that if we can obviate theſe, diminiſh the preternatural determination to the lungs, and fulfil the other general indications juſt now mentioned, we may very often enable nature to recover herſelf. He allows, indeed, that the phyſician's art has hitherto proved very unſucceſsful in theſe caſes; but he fears, that this is owing to the remedies which are employed being very often ſuch as are adverſe to the cure.

Our

Our author then proceeds to examine each of theſe remedies. He obſerves, that the Peruvian bark is perhaps the moſt commonly employed of any, and often conſidered as an ultimate reſource in theſe caſes. He is convinced, however, that in the genuine tuberculous conſumption, it is at all times inadmiſſible. He obſerves, that whenever pus, or any kind of acrimony, excites an hectic, by being abſorbed and carried into the circulation, the bark will never fail to exaſperate the complaints, eſpecially if it be accompanied with any degree of inflammatory diatheſis; unleſs when the matter has a free outlet from the ſyſtem, as in the caſe of abſceſs, for inſtance, in which we often find the bark productive of excellent effects. He adds, that it is likewiſe well known to be uſeful as a tonic, to obviate the effects of fluor albus, or any other immoderate evacuation in delicate perſons, which, by enfeebling the ſyſtem, very often lays the foundation of phthiſis; but that the moment we have reaſon to ſuſpect the lungs are ulcerated, it ought to be laid aſide.

He has ſeen the elixir of vitriol of uſe in the ſuppurative ſtage of the diſeaſe; in which it ſeems

ſeems to act chiefly as an antiſeptic, and its effects are to cool and refreſh the patient, and to check the colliquative ſweats. Before the hectic ſymptoms have come on, he thinks it may do harm.

Dr Simmons, contrary to the opinion of Dr Fothergill, ſpeaks in favour of the balſams, and other warm ſubſtances, in the ſuppurative ſtage of the diſeaſe. He has experienced the good effects of balſam of Capaiva, and of balſam of Peru, in theſe caſes, eſpecially when conjoined with nitre. In this part of the work, we have a long note on the uſe of myrrh in hectic caſes, communicated to the author by Dr W. Saunders of Guy's hoſpital. It ſeems that the practice of giving myrrh in theſe caſes, has long been in vogue at that hoſpital; as appears from the books of Dr Oldfield and others. Mr Stead, apothecary to the hoſpital, remembers it to have been the practice of a Phyſician in Yorkſhire upwards of thirty years ago, to give myrrh and ſpermaceti in ſuch caſes. And a bolus of theſe two ingredients has long had a place in the hoſpital Pharmacopœia. We are told, that in the inflammatory period of pulmonary diſeaſes, Dr Saunders has ſometimes found it too heating. It ought to be obſerved,

 however,

however, that he has always prescribed it simply, without the addition of nitre, or of any other corrector. When suppuration has taken place, and the period of debility come on, he thinks it a good medicine.

Dr Simmons next considers the effects of repeated bleedings in those cases; and here we meet with many judicious practical remarks, which the limits of our work will not allow us to insert. What he says concerning the use of blisters and issues, and of the abuse of opiates in pulmonary complaints, is equally deserving of attention. Upon the subject of diet, exercise, and change of climate, the reader will likewise meet with several new and interesting observations.

Dr Simmons has seldom seen bad effects from any kind of animal food, when dressed in a plain manner, and eaten sparingly once a-day, with a large proportion of puddings, ripe fruit, butter-milk, *&c.* In these cases, he observes, there is often as much danger from the quantity as from the quality of the food. He recommends a trial of the *lichen islandicus*, or *eringo-leaved liver-wort* (of which some account was given in a late number of our Commentaries)

to

to be boiled in milk, and given as an article of food.

Our author is of opinion, that Dr Sydenham's recommendation of exercise on horseback, in pulmonary cases, has done harm, by its having been too generally adopted. Dr Simmons allows, that in some cases where consumption is a secondary disease, as, for example, in the nervous atrophy, in the hypochondriacal consumption, or when it is the effect of long continued intermittents; of congestions in any of the abdominal viscera, or, in a word, whereever the consumption is not attended with an inflamed, or ulcerated state of the lungs, long journeys on horseback will be beneficial. Such a practice, he adds, may likewise be highly useful in obviating an attack of phthisis; or in carrying off a dry husky cough, in a person of a consumptive habit, when there is reason to suppose that no tubercles are as yet formed. Dr Simmons relates a striking instance of this sort, in the case of his own servant. On the other hand, he contends, that in the confirmed phthisis, when the lungs are inflamed or ulcerated, much or violent exercise will be improper. He says, he has seen more than one case in which

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the death of the patient was haftened by it. He then makes feveral remarks on the different modes of exercife; and paffes on from thefe to the confideration of change of air and climate, Briftol water, fea-voyages, *&c.*

Our Author fpeaks highly of the efficacy of frequent emetics in phthifical cafes, efpecially when given early in the difeafe. He is at pains to difcriminate the effects of the different kinds of vomits that are moft commonly employed; thofe which act by their bulk, and by exciting naufea, fuch as carduus tea, *&c.* he fays, will be improper. He likewife condemns the ufe of antimonial vomits, becaufe their operation is not confined to the ftomach. He obferves, that they produce evacuations by ftool, and a difpofition to fweating, and that they are confequently improper in the pulmonary hectic. In thefe cafes, he tells us, that he has often employed the blue vitriol with advantage, when adminiftered in the morning, and in the following manner: The patient is firft to fwallow half a pint of water, and immediately afterwards, the vitriol diffolved in a cup full of water. The dofe of it is to be adapted to the age and other circumftances of the patient; and it may be varied

varied from two grains to ten, fifteen, or twenty. In general, the moment the emetic has reached the ſtomach, it is thrown up again; the patient is then directed to ſwallow another half pint of water, which is likewiſe ſpeedily rejected, and this is commonly ſufficient to remove the nauſea.

After theſe obſervations on emetics, Dr Simmons ſpeaks of other medicines, ſuch as mercurials, chalybeates, and ſea-water, which are occaſionally recommended in pulmonary complaints. The firſt of theſe he deems improper in the genuine phthiſis. He has likewiſe often ſeen chalybeates do harm in the inflammatory ſtage of the diſeaſe. During his reſidence at the German Spa, he has ſeen the Pouhon and Geronſtere water uſed to advantage in caſes of ſcrophulous phthiſis. He obſerves, that in ſuch patients, the meſenteric glands are commonly more or leſs diſeaſed; and that mineral waters, by their ſtimulus, have a tendency to obviate this complaint. With regard to ſea-water, he ſuſpects that too much has been ſaid of its efficacy, even in ſcrophulous caſes. He obſerves, that it evidently does harm in every ſtage of the genuine phthiſis; at firſt, by its

ſtimulus, and its tendency to haſten the inflammation of the tubercles, and afterwards by augmenting the ſymptoms of hectic. Dr Simmons aſſerts, that he can place but little confidence in any thing Dr Ruſſel has ſaid concerning ſea-water.

Beſides the uſe of internal remedies in pulmonary affections, our Author obſerves, that Phyſicians have often preſcribed the ſteams of reſinous and balſamic ſubſtances to be conveyed into the lungs; that the vapour of dulcified ſpirit of vitriol dropt into warm water, has likewiſe been uſed in theſe caſes, and is advertiſed as a noſtrum under the name of *æther*; and that the inhaling of fixed air has alſo been ſpoken of as an uſeful practice. Dr Simmons has ſeen all of theſe methods tried at different times, but without having perceived any real advantages from them, in the ſuppurative ſtage of the diſeaſe, in which they might be expected to be of the greateſt uſe; and, in the beginning, he has often found the two firſt to be too ſtimulating. He therefore prefers the ſimple vapour of warm water, the good effects of which he has experienced in numerous inſtances, when employed at the firſt attack of the diſeaſe.

difeafe. But when the complaint has made any confiderable progrefs, we are told, that its utility is lefs obvious; and when the patients have been much weakened, he has feen it bring on profufe colliquative fweats, efpecially when ufed in bed. He has therefore generally recommended it to be ufed in the day-time. Dr Simmons clofes his work with an account of the *banos de tierra*, or *earth-bath*; which it feems is an old remedy in Granada, and fome other parts of Spain, in cafes of hectic fever, and confumption. It confifts in burying the patient up to the chin in frefh mould, and is highly extolled by the famous Solano de Luque. This remedy is likewife known to be of fingular efficacy in the fea-fcurvy. Dr Simmons gives inftances of its good effects in both thefe difeafes; and feems to think, that in both it acts upon the fame principles, by the effluvia of the earth being abforbed and carried into the circulation, fo as to correct the morbid ftate of the fluids. He tells us, it has been prefcribed with good fuccefs at Montpelier and Warfaw; and he expreffes his wifhes, that a trial of it may be made during the hot months in this country. It is a vulgar prac-

 tice,

tice, he obſerves, in ſome parts of Britain, to follow the plough, and to place children in the newly turned furrow, as a remedy in conſumptions; and he very judiciouſly reminds his readers, that there is often ſome good reaſon for very old and long continued practices, though it is frequently a long time before it is diſcovered, and the rationale ſatisfactorily explained.

VIII.

Philoſophical Obſervations on the Senſes of Viſion and Hearing; to which is added, a Treatiſe on Harmonic Sounds, and an Eſſay on Combuſtion and Animal Heat. By J. Elliot, *Apothecary.* 8*vo.* London.

VOLTAIRE has obſerved, that Nature, till the laſt century, lay hid beneath a veil. Des Cartes, ſays he, removed a corner of that veil. This obſervation might perhaps be applied to the author of the work before us, with reſpect to the ſenſory, if his hypotheſis be well founded.

He begins his obſervations on the ſenſes, with ſeveral new experiments on the eyes; and obſerves,

ſerves, after others, that if the corner of the eye be preſſed with the finger, a luminous ſpot or ring will appear; but with ſome remarkable circumſtances, which have not hitherto been noticed. The ring, for example, appears in a contrary ſituation, with reſpect to the eye, to that of the finger; and by moving the finger at intervals all round the eye, the ring appears to move in a direction diametrically oppoſite to it. The ring, however, appears not on the oppoſite ſide of the eye, but of the face. For example, when the finger is on the right ſide of the eye, the ring appears on the left ſide of the face; when the finger is under the eye, the ring appears on the top of the fore-head; and when the finger is above the eye, the ring appears about the upper lip. By preſſing the globes of the eye with his hands in the direction of their axes, he found, that a large luminous appearance was excited, reſembling the concavity of the leſſer ſegment of a ſphere, or parabolic conoid, the margin of which ſeemed cloſe to the face, but the centre of it at ſome diſtance; and the diſtance appeared leſs as the parts were nearer to the margin. The ring alſo appeared cloſe to the face, provided the margin of the retina was preſſed; otherwiſe

wife it appeared at fome little diftance. From the concavity of the luminous appearance, and its furrounding, not the whole body, nor merely the eye, he concludes, "that the retina of the "brain (as he terms it) encompaffes that portion "of the fenfory which anfwers to the part of the "face above defcribed."

He obferves, that by preffing both eyes, only one concave appearance is formed; as he knew by caufing the fame appearance by preffing one eye only. Alfo, that any two anfwerable parts of the eyes, whether excited by the rays of light, or by preffing the corners, yield but one fenfation, as if but one eye had been affected, excepting that the fenfation is ftronger. "Now, as thefe are affairs, fays he, merely mechanical, or refulting from organization, and in which there is no opportunity of being mifled by cuftom or habit, as is the cafe in many inftances of common vifion; thefe appearances having occurred at the very firft time of exciting the lumination, may they not be made ufe of to fettle the famous difputes concerning the inverfion of images in the eye, and feeing fingly with both eyes? Has not every part of the retina of one eye an anfwerable part in the other? Do not the

the correſponding fibres from the right ſides of both eyes meet in the brain, and terminate in the left ſide of the ſenſory; thoſe from the left ſides of both eyes, in the right ſide of the ſenſory; and thoſe from the upper and lower parts of the retina of both eyes, in the contrary parts of the ſenſory, ſo as to be in an inverted ſituation in the latter to what they are in the former?" In a note ſubjoined to this paragraph, he anſwers the objections which he thinks might be urged againſt this doctrine.

Marriotte has publiſhed a curious experiment, which ſhews that there is an inſenſible ſpot in the retina at the entrance of the optic nerve. If any object be looked at, whoſe image occupies the whole ſurface of the retina, one would imagine from thence, that an hole or dark ſpot ſhould be perceived in the part of the object anſwerable thereto. But no ſuch ſpot or hole is ſeen. In the concave lumination excited by preſſing the centre of the eye, alſo, no ſuch ſpot is diſcernible. This he explains in the following manner:

"I have obſerved, ſays he, that images which fall near that ſpot, are not perceived as properly defined. There is no ſuch vacuity, therefore, in the

the retina of the ſenſory (if I may be allowed the expreſſion); it ſeems to be filled up by the fibres of the optic nerve, diſperſed around that ſpot in the retina. Hence the ill-defined images there."

But the general concluſions which he draws from his experiments are, that there are colours liable to be excited in the eye independently of the rays of light; that theſe colours are cauſed by vibrations anſwerable to thoſe of the ſeveral ſorts of rays; that any one ſort of rays falling on the retina, excites thoſe vibrations only which are in union with them, and thence cauſes only their proper colour; and that in a mixture of ſeveral ſorts of rays falling on the eye, each ſort excites only its uniſon vibrations, whence the proper compound colour reſults from the mixture of the whole.

In the next ſection he treats of the ſenſes of taſte, ſmell, and feeling. He obſerves, that there are no taſtes, or ſmells, liable to be excited by irritating the organs of theſe ſenſes, as is the caſe with colours in the eye; but that feeling, on the contrary, is ordinarily excited by this means.

The

The experiments which he made on the eye, ſeem to have led him to attempt ſimilar ones on the ear; and he has diſcovered, that ſounds may be excited by preſſing the ear, in the ſame manner as colours may be excited by preſſing the eye, and concludes, that they have the ſame uſes. It is demonſtrated by philoſophers, he obſerves, that ſounds are cauſed by tremors, or vibrations in the air; and therefore, ſince ſounds may be exited in the ear, which do not at all depend on the pulſes of air, they are cauſed by vibrations liable to be excited in the ear of the ſame times, as thoſe aerial vibrations which cauſe the ſame ſounds. Alſo, as there are many different notes or tones of thoſe internal ſounds, there are as many different vibrations liable to be excited in the ear for cauſing them. The uſes of theſe ſounds may likewiſe be preſumed to be analogous to what were ſhewn of the innate colours, *viz.* That the air, external or internal, could not conveniently be made to communicate its vibrations immediately to the auditory nerve, but that the interpoſition of thoſe ſhewn to exiſt in the retina were neceſſary to that end. He concludes, therefore, that there are in the ear different times of vibration liable

liable to be excited, anſwerable to thoſe of the air, for cauſing the ſeveral gradations of ſound, analogous to what was quoted concerning viſion. And it may be proper to add, that he affirms that the ſame innate ſound is invariable with regard to its tone or note; that there are ſeveral (he imagines about eight) octaves of them, and that, while the vibrations in the retina are all blended together, ſo as to produce, on excitation by preſſure, a white colour reſulting from the whole, theſe in the ear are on the contrary diſtinct.

In the fourth ſection, he gives many obſervations and hints relative to other particulars of hearing. For example, he endeavours to make it appear probable, that hearing is compoſed of ſound, and a tremulous ſenſe of feeling; and that the former is even governed by the latter. The tympanum, he argues, is analogous to the retina, with reſpect to the ſituation of ſounds, though in that membrane only the ſenſe of feeling is excited. Sounds coming from different quarters without us, he thinks, affect different parts of the tympanum, as happens of the retina with regard to objects. He even attempts to ſhew, that the difference of ſounds, whereby they

they are known from each other, though of the ſame tones and loudneſs, depends on the principle juſt mentioned. There are alſo ſeveral new obſervations to be met with, relative to aerial and muſical ſounds; but as neither thoſe, nor the treatiſe on harmonic ſounds, come within our province, we muſt refer thoſe who are curious in ſuch matters to the work itſelf.

Mr Elliot's ſentiments reſpecting combuſtion and animal heat, would have appeared much more new, had he not been anticipated in many particulars by Dr Crawford, of whoſe Eſſay we lately gave an analyſis. For it appears, that he had formed a theory of thoſe matters on the ſame principles with that gentleman; and had even gone beyond him in ſome points, though he had likewiſe, as he ingenuouſly confeſſes, for want of convenience to make experiments and conſult authors, fallen into ſeveral errors. His theory of combuſtion is the ſame in effect with that of Dr Crawford, though he arrived at it by a different road; but his doctrine of nitrous combuſtion is eſſentially different. He argues, that the nitrous acid contains pure air in a fixed or combined ſtate: That on the proper application of heat, the phlogiſton of the

inflammable

inflammable body, and the air of the acid, mutually disengage each other, and unite with a shining heat in a manner similar to atmospherical air, and phlogiston in ordinary combustion; and that the air thus at liberty resumes its elastic state, becoming the same fixed air as is generated in common inflammation. He thinks, that air constitutes the essential part of the nitrous acid; and calls the fixed air generated in this process, the nitrous sulphur. He concludes this subject with a query, whether air does not also constitute the essential part of the vitriolic and other acids, but combined with other principles than in the nitrous?

In the seventh section, which he modestly entitles a *Speculation*, he gives a series of cases concerning fire, the manner in which it exists in bodies, and the laws by which it is regulated. He endeavours to show, that particles of air repel each other, by reason that they attract fire, and therefore are surrounded with atmospheres of that principle. And, on the same theory, he accounts for the expansion of bodies, and the separation of their particles by heat. By a very curious mode of reasoning, he was led to the discovery, that phlogiston diminishes the

attraction

attraction of bodies for fire. An opinion has lately been ſtarted, that the gravity of bodies is leſſened by their combination with phlogiſton. Our Author imagined, that it produced this effect, by weakening their repulſion for æther, on which repulſion their gravity depends. Till now, he had imagined that æther, fire, and phlogiſton, were one and the ſame fluid. But on applying this reaſoning to his notion concerning the repulſive force of particles of air, he found that it entirely claſhed therewith; for phlogiſton weakens the elaſticity of air, which he imagined was affected by diminiſhing the attraction of its particles for fire. By ſeveral experiments which he had made in conſequence of this idea, he ſatisfied himſelf that the propoſition was general; and from hence alſo he concluded, that fire, æther, and phlogiſton, were three diſtinct fluids. By uſing the word *attraction*, he has perhaps the advantage of Dr Crawford, who adopted that of *capacity*; the affections of the thermometer, *&c.* by heat, being more eaſily conceivable on that ſuppoſition. Dr Crawford barely aſſerted, that the capacities of bodies for containing heat, are diminiſhed by the addition of phlogiſton, and increaſed by the

 ſeparation

ſeparation of it. But Dr Elliot's propoſition is, that "phlogiſton weakens the attraction of bodies for fire, in proportion to the force of its combination, which affords, according to his theory, an eaſy ſolution for the phænomena of combuſtion, *&c.* For, the ſame quantity of phlogiſton being transferred from a body with which it is weakly combined, to another with which it may unite by a ſtronger attraction, the heat produced by the combination will be greater than the cold generated by the decompoſition, in proportion to that difference. He farther ſhews, that this force of combination may be increaſed even in the ſame body; and hence accounts for the heat generated by friction, by the rays of light, *&c.* and alſo for the phænomena of excitation in electricity, the excited electric abſorbing phlogiſton during the moment of friction, and conſequently attracting it from the bodies in contact; though indeed this increaſe of attraction immediately afterwards ceaſes. This principle he alſo applies to the heat in congelation, to the cold in evaporation, and to other phænomena of the like kind. Electrical repulſion, he imagines, depends on the ſame principle as the repulſion of particles of air."

Dr

Dr Crawford treats only of the heat in combuſtion; but our Author has alſo given a theory of the light, not only of combuſtion, but of ignition; which he ſuppoſes to ariſe from very different cauſes. He obſerves, that in ignition bodies are at firſt red-hot; but that as the heat increaſes, the colour verges more and more towards white. The particles, therefore, which compoſe the moſt refrangible rays, are leaſt refracted by bodies, ſo they are leſs forcibly retained by them, and hence are expelled with a leſs heat. The flames of phoſphorus or ſulphur, and ſome other ſubſtances, he obſerves, are not ignited, and they emit the more refrangible rays moſt copiouſly, contrary to what happens in ignition. The particles which compoſe the leſs refrangible rays, being leſs forcibly retained by the body, are firſt and moſt eaſily attracted by the air. But the joint action of the generated heat, and the attraction of the air, are ſo powerful, that they ſeparate the phlogiſton from the body faſter than the air can unite with it; and that part which is not immediately combined, reſumes its elaſtic ſtate, and is driven off in the form of light. But as the air, for a reaſon juſt given, unites moſt readily with the lar-

ger particles, thofe which are expelled muft be the particles which conftitute the more refrangible rays, and of courfe the colour will be blue. From hence it appears, that phlogifton is light in a ftate of combination with bodies, and that this light furnifhes the blue colour emitted in combuftion; whereas the light in ignition is derived from the phlogifton exifting in the pores of bodies in an elaftic ftate. The Author fhews, however, that the flames of moft bodies are alfo ignited, and hence fhine with the joint light of combuftion and ignition; and has given a table on this principle, exhibiting a curious analyfis of the colours of different flames.

His theory of animal heat is the fame in effect with that of Dr Crawford; but they differ widely with refpect to the origin of the phlogifton by which this heat is extricated. Dr Crawford fuppofes it to be derived from the putrefcent parts of the fyftem; our Author, from the nerves; on which he founds a very fingular fyftem of phyfiology. That the phlogifton is derived from this fource, he concludes from the well-known fact, that if the nerves which ferve any particular part be deftroyed, that part will be colder than before, although the blood circulates

circulates through it as ufual. But he endeavours to fhew, not only that animal heat, but alfo the vital, and other motions of the body, depend on the fame principle. He reduces thofe motions to the contraction of the moving fibres; and fuggefts, that for a nerve to caufe the action of a fibre, it is neceffary that the nerve fhould impart phlogifton, either immediately, or mediately, to the blood flowing through or by that fibre. He fuppofes, that the nerves derive their phlogifton, not from the brain, but from the chyle in different parts of the body, and he ftates his fentiments refpecting the ufe of refpiration in the following words:

"Now, as life depends on the action of the fibres; as there is a neceffary connection or dependence between the action of thefe fibres, and the phlogiftication of the blood; and as from the great number of moving fibres in the body in continual action, and the fmall quantity of the blood, the latter will be prefently phlogifticated; we have an idea of the very great importance of refpiration, and the abfolute neceffity of it to the continuance of life; as we find by experience to be the cafe; neither the heat of the blood, nor even the vital motions of the

ſyſtem, being capable of exiſting long without it."

From what has been ſaid, our readers may be able to form ſome idea of the ingenious conjectures and ſingular opinions propoſed by Dr Elliot. But although we have extended this article to a conſiderable length, yet we muſt refer the reader, who wiſhes to ſpeculate on theoretical queſtions, to the work itſelf, for information reſpecting many particulars which we have not mentioned.

IX.

Henrich Matthias Marcard, der Arzneywiſſenſchaft Doctors, zu Hannover, Mediciniſche Verſuche. 8*vo*. Leipſig.

i. e.

Medical Eſſays, by Henry Matthias Marcard, *Phyſician at Hanover.*

IN the Eſſays now before us, Dr Marcard preſents his readers with obſervations on different practical ſubjects. His remarks are principally the reſult of his own experience, during practice for ſeveral years. The firſt volume, of which

which alone we propofe at prefent to give an analyfis, is entirely on the fubject of jaundice.

In treating of jaundice, he prefents us with a doctrine concerning the difeafe in a good meafure peculiar to himfelf. But, before delivering his own opinion, he fets out with fome remarks on thofe which had already been offered by others. With regard to the nature of the diftemper, he obferves, that although ancients, as well as moderns, have very generally agreed that a preternatural yellow colour of the countenance, and particularly in the white of the eye, was an effect of the bile; yet they have differed as to the means by which this effect is produced.

He firft takes notice of the opinion of Pechlin, who confiders it as very improbable that the bile, which had once difcharged itfelf out of the liver, fhould return back again by the fame way, and from thence enter into the blood; and thus produce the difeafe.

Pechlin thinks it much more probable, that the materials of the bile exift in fuch a manner in the blood, that an accidental fermentation may feparate bile without any action of the liver, and give rife to the jaundice by the parts thus

ſeparated being thrown upon the ſkin. This fermentation in the blood, he ſays, may take its riſe from anger, melancholy, or the bite of a poiſonous animal. And he thinks, that this accounts for the ſudden exiſtence of the jaundice, in conſequence of any violent affection of the mind, much better than the received opinion, that the bile finds its way back again into the liver, and by its action enters into the blood.

The opinion of Galen, he obſerves, very much reſembles that of Pechlin. He imagines likewiſe, that the gall is circulated in a ſtate of perfect mixture with the blood, and that without any intervention of the liver, merely by external cauſes, ſuch as the bite of a poiſonous animal, it may be ſeparated from the blood. But, beſides this, he is likewiſe of opinion, that the jaundice may ariſe from the weakneſs of the gall-bladder, unable to draw to it the bilious matter from the blood.

Amongſt the moderns, Van Swieten and Morgagni do not altogether diſcard this doctrine. They advance, that although it be true every jaundice does not exiſt in this manner, yet they are to be found in the blood particles deſtined

for

for bile, which, without any action of the liver, can feparate themfelves from their mixture and occafion a jaundice.

Mead fays, that there is a fpecies of the jaundice which arifes from a fpafm of the nerves, when the fine elaftic fluid, which is contained in them, becomes too acrid and ftrong, fo as to fhut the bilious duct, and prevent the gall from paffing through the liver. It then, he thinks, finds its way upwards through the blood, and extends itfelf through every part of the body. He adds, that this is the cafe with the jaundice which arifes after colic pains and the bite of a poifonous animal. From this our Author obferves, it appears evident that Mead was of opinion, an obftructed feparation of the gall was one of the caufes of the jaundice.

Dr Bruning, an author of great judgment and learning, in treating of the jaundice which arifes from fpafm, offers an opinion which approaches fomething near to the former. He thinks, that when fome diforder of the liver prevents it from performing the fecretion of the bile, the oily and faline particles, which conftitute the principal part of the bile, remain behind in the blood. By this,

this, the natural and healthy mixture of the blood is changed, and a yellow-coloured *cacochymia*, and even the jaundice itfelf, is occafioned. Dr Bruning, however, does not confider this as the fole caufe of the jaundice. He fuppofes it to take place only in certain cafes, while in others the difeafe actually arifes from the bile already fecreted by the liver, which finds its way back again into the blood. And it is likewife the opinion of moft of the other writers, who have adopted this doctrine with refpect to the origin of the jaundice, that every jaundice does not arife in this manner. They always fuppofe, that the bile already fecreted may return again into the blood, and by this means occafion it.

In the fecond chapter, our Author proceeds to the examination of the foregoing theories. He obferves, that the opinion of Pechlin, and thofe other writers who fuppofe that the bilious particles abandon the circulating fluid and attach themfelves to the fkin, in one point of view, has fomething in its favour; as it may eafily be conjectured, that an obftructed fecretion of the bile from the blood may occafion an unnatural mixture. Still this, however, is mere conjecture.

It

It often happens, that although a tedious obſtruction in the liver may have exiſted, and conſequently, a tedious ſecretion of the bile, and given riſe to a ſenſibly yellow colour, yet it has by no means occaſioned a jaundice. Such a colour of the ſkin is ſometimes to be found, where not the liver, but the lungs, are affected. Dr Simpſon alſo has very well remarked in his treatiſe on the jaundice in the Edinburgh Medical Eſſays, that every yellow colour of the ſkin is not to be conſidered as a true jaundice; and that unleſs the white of the eye be yellow, and the urine conſiderably coloured, we cannot aſſert that the bile has any ſhare in this yellow appearance.

In order to ſhow that a jaundice cannot immediately ariſe from the blood, and the other circulating fluids, without the intervention of the *liver*, our author applies to the preparation of the bile the chemical terms of *product* and *educt*. Of theſe terms, he gives the following explanation: "That a *product* is what by a certain proceſs may be extracted from another ſubſtance, but could not formerly be found in the whole mixture, nor diſtinguiſhed by any of its effects and qualities. An *educt* again, is what could

could formerly be found in a body in its ſtate of mixture; and before it be extracted, poſſeſſes the ſame qualities it afterwards has."—Now, there is no doubt that the blood contains the materials of the bile. The only queſtion is, How theſe materials are contained in it? If the bile does already exiſt in the whole mixture, and be perceptible to the ſenſes in the blood, or, in other words, be only an educt, there is a foundation for the foregoing theory. But if, on the contrary, we can diſcover nothing in healthy blood which has any reſemblance to bile, and if it be a product from the blood, then this theory has no manner of foundation.

Our Author heſitates not to aſſert, that the bile is no educt from the blood. We neither obſerve in blood the very remarkable colour of the bile, nor taſte the bitterneſs; and we have no ground to ſuppoſe, that it is any other way ſeparated from the blood, than by ſome hidden operation of the liver. It therefore falls naturally under the idea of a product; as it was in no ſhape formerly to be perceived in the blood till it paſſed through the liver. From the application of this principle, it is in the higheſt de-

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gree probable, that there is no production of the bile but by means of the liver; and that the theory of Pechlin, with regard to the origin of the jaundice, is altogether a chimera.

But a ſtill more important objection to this theory he offers from the analogy of the other ſecretions. The ſecretion he conſiders in order to illuſtrate this, as being particularly analogous to it, is the ſemen; and concludes, that as the tears are not ſeparated by the pores of the ſkin, nor wax of the ear by the noſe, ſo it is equally unnatural to ſuppoſe, that the bile is ſecreted without the action of the liver.

As a further objection to this doctrine, in the fifth chapter, our Author adduces ſeveral inſtances of perſons affected with ſwoln and ſcirrhous livers, where an obſtruction muſt neceſſarily have taken place, but without any appearance of the jaundice.

After ſhortly mentioning the opinion of Sylvius, who ſuppoſes that the jaundice ariſes from a diſorder in the blood, which prevents the bile frôm intimately mixing with it, and that when the fluids are thus ſeparated, the bile attaches itſelf to the ſkin; a ſuppoſition which he conſiders

ſiders as altogether arbitrary: He next proceeds in the ſixth chapter, to conſider the modern and generally received theory with regard to the origin of the jaundice. It is now the common opinion, that no jaundice can ariſe but by means of bile actually ſeparated by the liver; and that the bile thus prepared, is thrown back into the blood by ſome preternatural circumſtance. This circumſtance is a ſtoppage of the bilious duct, which has been aſcribed to various cauſes. Amongſt the ſupporters of this theory, ſome pathologiſts, and Haller in particular, ſuppoſe, that the ſhutting of the hepatic duct alone may occaſion the jaundice, and excludes the gall-bladder from having any manner of influence.

Our Author examines this opinion at very great length; and, in order to prepare the way for this examination, he conſiders the nature of the bile when contained in the liver, and when it is in the gall-bladder. When it is already ſeparated by the liver, and in the bilious duct, its colour is very pale, and its bitterneſs but very inconſiderable. This he proves from ſeveral obſervations, and concludes, that the liver bile is ſenſibly different from the bile in the gall-bladder,

der, which is of a darker colour and very bitter taſte. He thinks, that this difference may either be occaſioned, according to an opinion of Haller, from the long continuance of the bile in the gall-bladder, and by that means a further ſeparation from its watery parts; or, that there may perhaps be a farther preparation and ſecretion of this fluid in the gall-bladder. While others have been of opinion, that the liver-gall may continue mixed with the blood, without producing any conſiderable effect; our Author thinks he may with confidence aſſert, that the liver-gall although it be even ſeparated from the blood, is by itſelf incapable, when again introduced into it, of giving any conſiderable jaundice. He contends, that it is unable to give to the ſkin, eyes, and urine, a colour, and to the ſaliva a taſte much ſtronger than its own.

After offering this objection to the generally received theory, he next applies to it the different cauſes which give riſe to the jaundice; of which he ſuppoſes gall-ſtones to be the moſt frequent and important, inſomuch that certain eminent writers are diſpoſed to allow no other cauſe to be capable of producing it. With re-

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gard to biliary ſtones, our Author obſerves, that they are for the moſt part found in the gall-bladder. Hoffman, he ſays, obſerves, that real biliary ſtones in the liver are in the higheſt degree uncommon, which he aſcribes to the thinneſs of the bile in the liver. It is true, other ſtony concretions are to be found in it, but theſe are not of a bilious nature, enter not into the bilious duct, and occaſion not the jaundice. After mentioning the obſervations of many anatomiſts on this ſubject, tending to confirm his opinion, he concludes, that if it appear that biliary ſtones chiefly occaſion the jaundice during the time they are in the gall-bladder or in the biliary duct; or if it be only certain, that in ſuch circumſtances jaundice often ariſes, then the probability of the theory, that the bile finds its way back through the liver to the blood, is greatly weakened. But he obſerves it is a certain fact, that very generally the ſtoppage of the uſual paſſage produces a jaundice. The inſtances of this are ſo numerous and undeniable, that he judged it unneceſſary to adduce them,

In like manner, our Author endeavours to ſhew, from the inflammation of the liver, and other

other received caufes of the jaundice, the weaknefs of this theory; and in general infifts upon the difficulty of the return of the bile through the liver into the blood, and the infufficiency of the bile from the liver to produce the jaundice.

After having thus endeavoured to prove in the firft part of his work, that from the moft frequent and moft important caufes of the jaundice, they cannot produce their effect in fuch a manner, that the bile from the gall-bladder can return back to the liver, and thence enter into the blood; and likewife, that in every confiderable jaundice the bile in the gall-bladder has a fhare, our Author, in the fecond divifion of this treatife, attempts to difcover the way by which the bile from the gall-bladder may mix with the circulating fluids, without paffing through the liver. In the firft chapter, from a variety of curious inftances of morbid diffections, Dr Marcard proves, that the bile, in cafe of any ftoppage of the duct, finds its way through the fubftance of the gall-bladder, into the cavity of the abdomen, and then enters into the circulation. The bile, he fays, is of a very penetrating nature, and the gall-bladder, like every membrane

of that kind, is porous. In ſupport of his opinion, he adduces a variety of facts from morbid diſſections, where a conſiderable quantity of bile was found on the outſide of the gall-bladder, which plainly appeared to have oozed through; and in one inſtance, it was in ſo great quantities in the abdomen, that it could have been taken up in ſpoonfuls. Amongſt others, he mentions a very curious inſtance from the Engliſh Philoſophical Tranſactions, inſerted by Dr Alexander Stuart, of a ſoldier wounded in the right ſide, who died in the 17th day, and was affected with a partial jaundice. His urine, and ſome of the under parts of his body, were yellow, as if ſtained with ſaffron. Upon diſſection, he was found to have a ſmall triangular wound in the bottom of the gall-bladder. From this inſtance he maintains it is evident, that the bile poured into the cavity of the abdomen enters into the circulation.

In the ſecond chapter, Dr Marcard proceeds to point out ſtill another way by which the bile may intermix with the circulating fluids, without paſſing through the liver. He obſerves, that when the diſcharge of the urine is ſtopped by ſome obſtruction in the urethra, it is an undeniable

deniable fact, that the urine already secreted finds its way back again into the blood; and that in this case, no one is disposed to think that the urine rises up again through the long passage into the kidneys, and then enters into the blood. With much better foundation they advance, that in the bladder, as well as in all the cavities of other animals, there exist certain absorbent vessels, which, in a sound state, only take away a pure unmixed fluid; but when there is a total stoppage of the discharge, in consequence of the stimulus occasioned by the very great fulness, and by the acrimony of the quantity so long contained there, they now allow the urine to enter into the mixture, which by this means finds its way into the blood. Although we cannot absolutely conclude, from what in certain circumstances takes place in the bladder containing the urine, that in a similar situation the same thing shall take place in the gall-bladder; yet our Author thinks it in the highest degree probable. And the reason why this has not been attended to is, because another way seemed possible. For the gall-bladder has not only as many lymphatic vessels as the urinary bladder, but many more, and much more visible. He

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obſerves, that many greater and more remarkable changes muſt take place on the bile than with the urine, during its continuance in the bladder, as the urine is diſcharged almoſt always as it comes from the kidneys. The bile, while it is a very mixed fluid, and of conſiderable conſiſtence, is nevertheleſs of a very penetrating nature, as is obvious from its effects upon the parts in the neighbourhood of the gall-bladder; and is therefore very well adapted to penetrate through the veſſels. And if this be its nature in a ſound and healthy ſtate, how much more may it act in this manner in a morbid condition? Our Author, therefore, ſees no reaſon why he may not advance, that the many abſorbents of the gall-bladder, which, in a natural ſtate, only imbibe the ſuperfluous fluids, when in a morbid condition may paſs the bounds of their deſtination, and admit the bile in the entire mixture. The kidneys, he ſays, ſometimes let the blood through. And when bile is thus received by the lymphatic veſſels, it enters into the ſyſtem of blood-veſſels, and thus into the maſs of circulating fluids.

The two ways, therefore, by which Dr Marcard aſſerts the bile enters into the blood, with-

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out paſſing through the liver, are the abſorbent lymphatic veſſels, and the inorganic openings or pores of the gall-bladder. He thinks, that this laſt way will only take place when the bladder is very much diſtended, either from its being very much filled with bile, or when it is not ſo much filled but preſſed upon by ſome external force; or when the coats of the gall-bladder are affected by ſome particular torpor. In theſe caſes, he ſays, it is no wonder that the tranſudation of it ſhould continue even after death, unleſs ſome particular cauſe ſhut the pores that were thus opened.

The cauſes which force the abſorbent veſſels to receive the bile, according to appearances, are more numerous; in this however they agree, that it is in conſequence of ſome ſtimulus excited they produce this effect. Both theſe ways may exiſt at the ſame time, and then their effect is the more conſiderable; and even the very great diſtenſion of the gall-bladder, which enlarges the pores, may, in the end, have an effect upon the lymphatic veſſels, and force them to attract the bile. He looks upon it, however, as certain, that the inordinate action of the abſorbing veſſels is by much the moſt

frequent cauſe of the jaundice, as it may take place when there is not a very great quantity of bile in the gall-bladder, and when the paſſage from the gall-bladder to the inteſtines is not in the ſmalleſt degree obſtructed.

After having thus eſtabliſhed his theory, and that liver-bile is inſufficient to produce the jaundice, which muſt be occaſioned by bile already prepared in the gall-bladder: That the bile from the gall-bladder does not return back again into the liver, and thus enter into the blood, but either finds its way through the pores of the gall-bladder into the cavity of the abdomen, or is abſorbed by the lymphatic veſſels, Dr Marcard next proceeds to apply this doctrine to the various cauſes inducing the jaundice.

The firſt which he conſiders is ſpaſm; and, after mentioning the various cauſes inducing ſpaſm, he ſhows how it produces its effect. He points out the different influence of ſtones in the gall-bladder, that when they are free and detached, they produce their effect by occaſioning a ſtimulus, and inducing a ſpaſm; but when in the neck of the gall-bladder, they ſtop up the paſſage and prevent the diſcharge.

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When the jaundice arifes from the bite of a poifonous animal, he is not of opinion with Dr Simpfon and fome ancient authors, that it is occafioned by an internal commotion of the blood. But he thinks, with Dr Mead, that it arifes from fpafm. He does not, however, with Dr Mead, afcribe it to a fpafm which only affects the common canal, and thereby forces the bile back through the liver into the blood, but to a fpafm which has this peculiarity in it, that it produces an effect upon the abforbent veffels of the gall-bladder. After mentioning a variety of other caufes, which Dr Marcard thinks occafion a jaundice by inducing fpafm, he confiders fome caufes which produce this effect without occafioning fpafm. Thefe are ftoppages of the neck of the gall-bladder, which, though unfrequent, are neverthelefs very certain caufes of the jaundice. And while ftones ftick faft in the biliary duct, they may produce their effect in this manner, but much more frequently by exciting a ftimulus and inducing a fpafm. Befides this, he mentions others, fuch as a defect in the abforbent veffels of the gall-bladder, the thicknefs of the gall, and the like. And he fhews, that all the various caufes operate in the ways he has pointed out, in producing the jaundice.

To this Treatiſe upon the Theory of the Yellow Jaundice, he ſubjoins an Appendix, containg a ſhort account of the Black Jaundice, and practical obſervations upon the treatment of the Yellow Jaundice.

Although the black jaundice is ſometimes nothing elſe but a dark yellow jaundice; yet at other times, the colour is ſo very dark, and appears in ſuch a manner, that we muſt conclude it to have ſomething peculiar in its nature, and not merely to be a higher degree of the yellow jaundice. This diſeaſe is well known to be much more frequently mortal than the yellow jaundice. The ancients imagined that it aroſe from the ſpleen: But, from ſeveral inſtances which our Author adduces, he obſerves, that although the diſeaſe which is named *black jaundice* be manifold, ſtill, however, he is diſpoſed to think it is nothing elſe than a ſtrong yellow jaundice. He contends, that the bile can aſſume all manner of colours, green, red, and, in certain circumſtances, black. The worſt kinds of black jaundice are, he ſays, thoſe which ariſe from a very great conſumption in the organical parts of the biliary ſyſtem. When it only differs from the yellow jaundice, in the ſkin having

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a greenish appearance, or when any difference may arise merely from a preternatural colour of the bile, in the view of medical treatment, the black jaundice has nothing peculiar from the yellow jaundice. But when it arises from any consumption of the important viscera, our Author suspects, that in such cases art can very seldom apply any remedy; and hence the cause why the black jaundice is so often mortal.

In the cure of the jaundice, our Author says, he has two objects in view, the one is to remedy the consequences of this disease, and the other to remove the causes of it.

On account of the obstructions which take place, cleansing medicines are often employed, and in general rhubarb is given: But where there is any reason to suspect spasm, or to hope that stones may be discharged, our Author thinks that manna is much preferable.

In order to correct the disorder which must arise in the state of digestion from the want of the bile, many means have been devised, but nothing appears to our Author equal to thickened ox-gall in pills.

To correct the heat and burning in the external parts, even when there is properly no fever, he recommends the use of acids.

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He propoſes a variety of medicines for the biliary ſtones, the moſt important cauſe of the jaundice, both with the view of removing and of diſſolving them.

When a biliary ſtone occaſions very great motions in the body, blood-letting is uſually recommended; but opium he conſiders as by much the moſt important remedy for removing the violence of the ſymptoms which ariſe from the ſtimulus of a ſtone. For, in conſequence of this, it is often, he obſerves, neceſſary to diminiſh the intolerable pain, to remove the ſpaſm, to quiet the continual vomiting, and to ſupport the ſtrength, and ſometimes even the life of the patient. A variety of other medicines of a diluting nature, are likewiſe recommended by our Author, with the view of fulfilling the ſame intention, as almond-oil, ſpermaceti, *&c.* He adviſes alſo, external fomentation of the place where the diſorder has its ſeat, baths of tepid water over the whole body, and emollient glyſters.

The greater probability there is that the ſtone may be diſcharged, the more foundation there is to have recourſe to violent purges and vomits. But, in the uſe of vomits, particular caution is neceſſary,

neceſſary, and he thinks they are only to be employed when there is no reaſon to dread any inflammation, or to ſuſpect any defect of the viſcera. A great deal of motion, and a long journey, has likewiſe been recommended, with the view of diſcharging the biliary ſtones. Our Author likewiſe gives his opinion about the efficacy of ſoap, and ſome other medicines uſed for the biliary ſtones. He afterwards points out the medicines to be uſed when the jaundice ariſes from ſpaſm, where he ſays, particular attention muſt be paid to the cauſes inducing it. He concludes with examining the various ſpecifics for this diſeaſe, in none of which he is diſpoſed to place any confidence.

IX.

IX.

Observations on Fevers, especially those of the continued Type; and on the Scarlet Fever, attended with ulcerated Sore Throat, as it appeared at Newcastle *upon* Tyne *in the year* 1778: *Together with a comparative View of that Epidemic with the Scarlet Fever, as described by Authors, and the Angina Maligna. By* John Clark, M. D. *one of the Physicians to the* Newcastle Dispensary. 8*vo.* London.

DR CLARK is an author whose name we have already, oftner than once, had occasion to mention in these Commentaries. Besides the analysis which we gave of his observations on diseases in long voyages to hot climates, our readers may also remember several original papers with which he has enriched this periodical publication. In the present work, he treats of a subject, which, although often before considered, must still be admitted to be important, and will, we doubt not, be viewed as affording a valuable article for the present number.

It would much exceed the limits of our publication, to give a complete analysis of the volume

lume now before us; we ſhall therefore only endeavour to preſent our readers with a conciſe account of the opinions and practice of our Author; particularly of thoſe which differ from the eſtabliſhed doctrines.

Dr Clark has divided his work into two parts. In the firſt, he treats of fevers, eſpecially thoſe of the continued type. After introducing his ſubject, by giving a ſhort definition of primary fevers, we are, in the ſecond ſection, preſented with obſervations on their difference. He remarks, that both the ancients and moderns have divided fevers into many *genera*, and have beſtowed many appellations upon them, derived from the time of their duration, from ſome remarkable predominant ſymptom, from the ſtate of the fluids which accompany them, and from other circumſtances. But he thinks, that the many names to be found in books, only load the memory, perplex the unexperienced, and are of no real advantage in practice. After careful attention to the ſymptoms and nature of fevers, in different climates, our Author is convinced, that although many varieties happen, according to the difference of conſtitution, ſeaſon, ſituation and country, yet every where fever

ver is essentially the same, or, in other words, consists of one *genus*, and that the only *species* that can be clearly ascertained are the following, *viz.* intermittent, remittent, and continued fevers. In support of this opinion, he recites the essential symptoms of these species; and concludes, that continued fevers do not differ more from the remittent, than the last from the intermittent type. Their frequent changes into each other, prove them to be of the same *genus*; and the variety of their forms, he thinks, depends in a great measure upon the difference of climate, constitution, *&c.* but more particularly on the concurrence of the remote causes of fever, *viz.* a moist warm state of the air, marsh effluvia, and human contagion; the two former producing the intermittent or remittent, and the latter almost always the continued type.

Continued fevers have been commonly supposed, by medical authors, to consist of three *genera*, the *inflammatory*, the *nervous*, and the *putrid*. Dr Clark, however, rejects this division of fever, as he is of opinion, that these supposed *genera* only express different states of fever. The inflammatory fever, for example, is defined to consist in intense heat, frequent, strong, hard and full pulse,

pulſe, with high-coloured urine. Moſt fevers, in their incipient ſtate, he obſerves, are attended with theſe ſymptoms, which however prevail more in the paroxyſms of intermittent and remittent fevers, than in thoſe of the continued type. Even the depreſſing powers of contagion, do not always guard againſt ſymptoms of ſtrong action in the heart and arterial ſyſtem. Gilchriſt, deſcribing the *nervous* fever, remarks, "That in "ſome the ſeizure and ſymptoms on the firſt days "were violent; ſuch as vomiting, nauſea, head-"ach, full, ſtrong, and hard pulſe, heat and red-"neſs of the eyes." Except by the tremors of the hands, even the jail or hoſpital fever is not to be diſtinguiſhed, in the beginning, from any common fever. Sir John Pringle in the nervous fever, and Huxham in the putrid fever, adviſe bleeding to moderate the ſtrong action of the veſſels. For theſe reaſons, our author thinks, whatever attention this ſtate of fever may merit in practice, as it equally attends intermittent, remittent, and continued fevers, it ought not to be admitted as conſtituting any generic difference.

The term *inflammatory*, indeed, in his opinion, ought only to be applied to fever when it is the concomitant of inflammation; and he adds,

adds, that, however contrary the aſſertion may be to the authority of Phyſicians of the firſt eminence, he has never met with an idiopathic inflammatory fever. He is inclined to believe, that the ſizy appearance of the blood, which has led to the opinion of fevers being inflammatory, is no certain criterion of inflammation, as it has been frequently obſerved to exiſt in the blood of thoſe who have laboured under putrid diſeaſes; and, in ſupport of this fact, he quotes the authority of Drs Heberden, De Haen, and Sir John Pringle.

Having, for theſe reaſons, rejected the *inflammatory* fever, as an idiopathic diſeaſe, he proceeds to the conſideration of the other diſtinctions which have been applied to continued fevers. Every ſymptom characteriſtic of the *nervous* fevers, he remarks, attends *remittents* of hot climates; and even all continued fevers in this country, are, in general, ſooner or later ſucceeded by this ſtate of fever. And with regard to the *putrid*, although in ſome fevers the fluids from the beginning have appeared in a diſſolved ſtate, yet putreſcency is more frequently an effect of fever than a cauſe, and equally attends intermittent, remittent, and continued fevers.

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There appears, therefore, he thinks, great impropriety in confining theſe terms to continued fevers; and ſtill more ſo, in eſtabliſhing them as different *genera*.

In other diſeaſes, Dr Clark farther obſerves, were we to form diſtinct *genera*, from different ſtates of the fluids and other attending circumſtances, as has been the caſe in continued fevers, we ſhould very much multiply diſeaſes, which are eſſentially the ſame. The ſmall pox, for example, is almoſt always attended with fever, which, in ſome patients, is accompanied with *ſtrong action* in the veſſels; in others, with ſymptoms of debility and *nervous diſtreſs*; and in others, with thoſe which denote a tendency in the fluids to putrefaction. Nay, even the ſame patient (which is alſo the caſe in continued fevers) will, in a few days, go through the different ſtates of fever which attend this diſeaſe; yet every Phyſician knows, that the diſtemper proceeds from the ſame ſpecific contagion; and that theſe varieties expreſs no generic difference. Upon the whole, he is of opinion, that all primary fevers are attended with the ſame eſſential ſymptoms; and that the only difference is, that in ſome of them the intermiſſions and remiſſions are perfect, and in others ſo obſcure as juſtly to

to entitle them to the name of *continued*. He likeways allows, that they differ from each other, in being ſometimes attended with ſtrength and activity in the vaſcular ſyſtem, ſometimes with ſymptoms of debility, and ſometimes with thoſe which denote a tendency in the fluids to putrefaction. He thinks it therefore reaſonable to conclude, that they do not ariſe from ſo complex an origin, nor require ſo great a variety in treatment, as has been generally imagined.

Having made theſe obſervations, our Author paſſes over the treatment of intermittent and remittent fevers in a curſory manner; as the uſe of the Peruvian bark in the former is univerſally eſtabliſhed, and as he has already treated of the latter in another publication*. He then proceeds, in the third ſection, to treat of the cure of continued fevers.

Although he admits that great variety obtains in continued fevers, with reſpect to their ſymptoms and degree of danger, yet in practice he judges it principally neceſſary to attend to the following diſtinctions or ſtates of fever:

1. Continued fevers frequently in the beginning are attended with ſtrong action in the vaſcular

* *Obſervations on the Diſeaſes in long voyages to hot countries*, &c.

cular syſtem; and this ſtate may be diſtinguiſhed by the following ſymptoms: The pulſe is quick, ſtrong, hard and full; the heat of the body intenſe; the urine high-coloured, and often in ſmall quantity; and the ſenſes and ſpirits remain tolerably clear. If the fever continue, or if it be not prevented by the method of cure afterwards to be mentioned, it is for the moſt part ſooner or later ſucceeded by the following ſtate.

2. Continued fevers are more frequently from the beginning, or ſoon after their formation, attended with debility and depreſſion of the vital powers; and this ſtate may be diſtinguiſhed by the following ſymptoms: The pulſe is weak, quick, and frequently unequal; the urine commonly pale; the heat not very intenſe; and the ſtrength and ſpirits proſtrated. Watchfulneſs and delirium are added, and, as the diſeaſe advances, the delirium terminates in coma; *ſubſultus tendinum* enſues; the ſtools and urine frequently glide off involuntarily; and the patient is apt to faint on the leaſt motion.

3. Both the preceding ſtates of fever are frequently ſucceeded by, or attended with, a diſpoſition in the fluids to putrefaction, which is diſtinguiſhed by the following ſymptoms: The

tongue becomes dry and black; the breath and ftools fœtid; *petechiæ*, purple or livid fpots, appear; hæmorrhages happen from the nofe and various parts: and, before death, the body very frequently emits a cadaverous fmell.

Having thus diftinguifhed continued fevers, and having given the above characteriftic fymptoms, by which their moft important ftates may be known, he proceeds to mention the method of cure which he found moft beneficial.

In the firft ftate of fever, Dr Clark directs emetic tartar to be given in fuch dofes as to vomit gently; and if the ftrong action of the veffels do not abate, we are told, that it will be proper to continue the antimonials for fome days longer, in fuch a manner as to keep the fecretions open. Should it fail to operate downwards, fome mild laxative muft be added. As foon as the velocity of the circulating fluids is by this means diminifhed, he commences immediately with the Peruvian bark, without regard to remiffions or exacerbations, and continues it in as large dofes as the patient's ftomach will bear. And we are told, that if this method be in due time applied, the difeafe will feldom terminate in the other ftates of fever, or, in other words,

words, become *nervous* or *putrid*. With regard to bleeding in this ſtate of fever, he allows, that there may be ſome caſes which may demand its uſe, particularly when there are evident ſigns of topical determinations of blood, to the head, lungs, or any other part; when the patient is plethoric and vigorous; and when the diſeaſe derives its origin from other cauſes than contagion. But we are told, that during ſeveral years practice he has only had occaſion to direct this evacuation twice in continued fevers.

In the *ſecond* ſtate of continued fever, attended with debility and depreſſion of the vital powers; when called in the beginning, if the ſkin be hot and dry, he gives antimonials as directed in the former ſtate; but he never continues their uſe ſo long as to produce profuſe evacuations. But when the patient has been much weakened, or the diſeaſe advanced, he thinks antimonials are unſafe, and ought to be omitted entirely. With reſpect to other medicines, he places the whole ſtreſs of the cure on the Peruvian bark, without waiting for remiſſions.

In the *laſt* ſtate of fever, the bark ought to be given in very liberal doſes, together with the vegetable or vitriolic acid; ripe fruits, wine,

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and other antiseptic liquors. The use of the bark, in this state of fever, being so agreeable to the established practice, our Author thinks there is not the least occasion to insist upon the advantage which may accrue from it.

If the above method of cure be employed in the different states of fevers, during the first week, we are told, that it will very frequently remove them. But after they are once confirmed, all that can be expected from the bark is to obviate debility, counteract putrefaction, and to prevent fatal determinations to the viscera, which our Author esteems the principal causes of death in fevers. Besides the method of cure above recommended, he uses, as auxiliaries along with the bark, *pediluvia*, or fomentations to the legs and feet; the free admission of cold air; taking the patients out of bed; light clothing; keeping the belly regular; the use of opiates, and blisters in some cases; and when symptoms of debility, or putrescency prevail, cold drinks with a sufficient proportion of generous wine.

In support of the practice recommended in the common states of continued fever, the Author has related twenty-eight cases very minutely,

nutely, in which it was attended with remarkable ſucceſs.

In the fourth ſection, we are preſented with the account of a variety of continued fever, which prevailed at *Newcaſtle* in the autumn of 1777. The diſeaſe began with ſhivering, liſtleſsneſs, ſickneſs at ſtomach, and univerſal pains. On the invaſion, ſome complained of cough, ſtricture and oppreſſion of the breaſt, attended with ſlight ſtitches of the ſides, and wheezing reſpiration. In a few days, the ſtrength and ſpirits were proſtrated, the tongue became dry and brown, and the teeth were covered with a thick fur. A delirium and ſtupor ſoon appeared; and theſe ſymptoms often remained for ſeveral days after the fever had vaniſhed. About the eighth or tenth day of the diſeaſe, ſometimes ſooner and ſometimes later, both red and white miliary eruptions appeared, which were frequently interſperſed with *petechiæ*. In many, the countenance was bloated; the eyes dull and blood-ſhot; the throat covered with an *aphthous* cruſt; and the ſtools involuntary, bilious, and putrid. In this fever, antimonials given in the beginning, together with paregoric elixir to appeaſe the cough; and afterwards, the bark in

liberal doſes, were attended with the happieſt ſucceſs. To illuſtrate the nature of this epidemic, twenty caſes are ſubjoined.

This part of the Work is concluded with an account of the ſucceſs of the Author's practice in fevers; and a detail of the caſes which terminated fatally under his care at the *Newcaſtle Diſpenſary*: By theſe it appears, that *two hundred* and *three* patients were admitted, labouring under continued fevers; of whom, *one hundred* and *ninety-ſix* were diſcharged perfectly cured; *ſix* died, and *one* was diſmiſſed for being irregular, whoſe caſe afterwards terminated fatally.

The *ſecond* Part of the Work contains obſervations on the Scarlet Fever, attended with ulcerated ſore throat. The Author introduces his account, with ſome remarks on the ſtate of the air previous to, and during the prevalence of this epidemic. The diſeaſe, we are told, made its appearance at *Newcaſtle* in the beginning of June 1778, and ſoon after extended itſelf to many towns and villages in the neighbourhood, both in the counties of *Durham* and *Northumberland*. It was moſt frequent in Auguſt, September, and October; was upon the decline after

after December; but a few inftances of the dif-eafe occurred ftill till Auguft 1779.

The difeafe, we are informed, was peculiar to children and young perfons; although feveral adults expofed to the contagion did not efcape. The diftemper was not prevalent in genteel families, but raged with great mortality amongft the lower clafs of people. The fmall pox was alfo frequent at the fame time, and fome cafes of the inflammatory fore throat, and eryfipelas occurred. The meafles appeared in January 1779, and fucceeded this difeafe as an epidemic.

From a table which the Author has annexed, it appears, that children of all ages under ten years, were moft liable to the difeafe; that under twenty years of age, the number of males and females was almoft equal; but that above this period, the number of females greatly exceeded that of males; a circumftance which he accounts for, from the former being more expofed to contagion, from being employed in attending the fick.

Having made thefe introductory obfervations, Dr Clark, in the firft fection, proceeds to the defcription of the difeafe. No epidemic, we are informed, varied more in different patients expofed

posed to the same contagion, than the scarlet fever attended with ulcerated sore throat. In some, it was so mild as to require little aid from medicine; whilst in others it was so malignant as to yield to no plan of treatment. The disease, in general, began with sickness, lassitude, and chilness or shivering. The patient soon complained of headach, and pain of the throat. The skin became hot, the pulse very quick, often full and firm; but sometimes it was small and feeble, though generally hard. At night the fever ran high; and the patients were restless and often delirious.

Soon after the attack, the tonsils, *velum pendulum palati*, and *uvula*, appeared inflamed. The swelling and redness in these parts increased, and white sloughs or ulcerations were soon discovered. Deglutition became painful, and often exceedingly difficult; and respiration quick, and frequently laborious. The breath was hot, though not offensive; the tongue was soon covered with a white fur; the mouth and *fauces* were loaded with viscid mucus, and this, together with the tumefaction of the throat, occasioned, even early in the disease, rattling breathing. Such was the usual progress of the disease

during

during the firſt three days; but, in many caſes, theſe ſymptoms were uſhered in with vomiting, purging and delirium.

When the diſeaſe began with great ſeverity, the ſcarlet efflorefcence was often obſerved on the firſt day; but, in general, it did not make its appearance until the ſecond or third day, and ſometimes not until the fourth. The eruption conſiſted of innumerable little pimples running together, and tinging the ſkin of a dull red colour. The redneſs was firſt perceivable on the face, neck, and breaſt; and was often univerſally diffuſed over the body, which appeared, in ſome degree, tumefied. In others, the eruption was ſcattered here and there in blotches; but the thighs, legs, and arms, were, in general, covered with it; and the hands and fingers were often œdematous, and painful when preſſed.

The duration of the efflorefcence was uncertain; it however, in general, turned brown in three or four days; the ſkin became rough, and peeled off in brawny ſcales, and very frequently in large, thick, jagged pieces. In one patient, the deſquamation was ſo complete, that the nails caſt of; and in many, we are told, that the cuticle kept peeling off after the 30th day of the diſeaſe.

When

When the difeafe was malignant, after the appearance of the eruption, the floughs encreafed; the maxillary and parotid glands fwelled; the eyes became dull and heavy; the face and neck often bloated and œdematous; and the patient either laboured under inquietude, delirium, or coma. In milder cafes, after the defquamation of the cuticle, the fever fubfided, the ulcerations healed, and the patients were fpeedily reftored to health. Several, however, fell into anafarcous fwellings, and either true *hydrops pectoris*, or dropfy of the cellular fubftance of the lungs. Others, after fhewing figns of recovery, kept drooping, and, though free from fever in the day, paffed hot and reftlefs nights; the countenance became pale, the face puffy, and the maxillary and lymphatic glands of the neck continued fwollen. Pale thin matter ran from the nofe and ears, and at laft fuppurations were formed in the *Euftachian* tube, which deftroyed the *tympanum;* and fome patients loft the *auditory* bones.

When the fick applied late for affiftance, the inflammation communicated to the *trachea* and lungs, occafioning hoarfenefs, inceffant cough, wheezing and rattling refpiration. A child, we

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are told, was admitted to the Difpenfary in this fituation, even fo late as the 14th day of the difeafe; and our Author faw feveral other miferable objects, who had furvived to as late a period, with ulcerations, which had perforated the *velum pendulum;* and excoriations of the mouth, lips, and parts near the *anus*.

From the above defcription, Dr Clark obferves, that the fcarlet fever and fore throat has a great analogy to the *angina maligna;* he thinks indeed, they proceed from the fame fpecific contagion; and in confirmation of this opinion, he gives us an account of the different ftates of the fcarlet fever during its prevalence at Newcaftle. Of *thirty-fix* patients, whom he attended in private practice, *twenty-fix* had the fcarlet fever, accompanied with mild ulcerations of the throat; in *one* it was fucceeded by dropfy, and *nine* had the difeafe attended with every diftinguifhing fymptom of the *angina maligna;* yet in all thefe cafes the fources of contagion were apparently the fame. Of *ninety-five* patients, who came under our Author's care at the Difpenfary, *forty-nine* had the fcarlet fever with a mild ulcerated fore throat; in *twenty-two* the difeafe was fucceeded by dropfy; and in *twenty-four*

twenty-four it was accompanied with *angina maligna.*

But in moſt patients, Dr Clark admits that the epidemic differed from former accounts of the *angina maligna*, or putrid ſore throat, in the following particulars: In the beginning it was accompanied with ſtronger action of the veſſels, and the ulcerations were of a milder nature; the patient ſeldom in the beginning complained of debility or faintneſs; the efflorescence was commonly more plentiful, and the deſquamation of the cuticle more complete. In the *angina maligna*, as deſcribed by authors, the patients moſt commonly die on the third or fourth day of the diſeaſe; whereas in the ſcarlet fever, in the caſes which proved fatal, moſt of the patients protracted their miſerable exiſtence to the 13th, 15th, 16th, 17th, and ſometimes even to the 19th, day of the diſeaſe; but above all, the ſcarlet fever frequently terminated in dropſy, a diſeaſe which no author mentions as being the conſequence of the *angina maligna.*

The Author next enters upon the inveſtigation of the cauſe of the diſeaſe, of which we cannot pretend to give a detail.

In the ſecond ſection, Dr Clark preſents us with a comparative view of the above epidemic,

with

with the ſcarlet fever of authors, and the *angina maligna*, together with the various methods of cure which they have recommended. From this review which he has taken of the ſcarlet fever, as it has been obſerved in different parts of Europe, and of the *angina maligna*, he is farther convinced, that they ought not to be conſidered as diſtinct affections, but only as different *ſpecies* of the ſame diſeaſe. The *ſcarlet efflo-reſcence* is a leading ſymptom, and in both diſeaſes there is a determination of the morbific matter to the throat.

Our Author, indeed, is ſenſible that plauſible objections may be made to this opinion; and that it may require the united efforts of the Faculty and future experience to aſcertain its truth. It may be urged, that the *angina maligna* requires a very different treatment from ſeveral ſpecies of the ſcarlet fever: This circumſtance, however, he thinks, is not ſufficient to conſtitute a generic difference, for the ſame thing happens in the varieties of the ſmall pox, which is well known to ariſe from ſpecific contagion. It may be objected, that the ſcarlet fever only ſeizes patients once in their lives, whereas having the *angina maligna* once is no ſecurity againſt a ſe-

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cond attack: This he allows to have ſome weight; though he very much doubts whether the *angina maligna* was ever attended with the ſcarlet efflореſcence twice in the ſame patient; yet it is probable, that when the diſeaſe is epidemic, the ſame patient may have the affection of the throat repeatedly. But, without conſidering the ſubject in this extended point of view, he is certain, that the practice can never be properly guarded, and miſtakes muſt conſtantly ariſe in treating diſeaſes in ſo many reſpects different.

In the third ſection, our Author proceeds to the cure. Although the diſeaſe was not new to him, having once before ſeen the ſcarlet fever and ſore throat epidemical; yet, from the combination of the *inflammatory* and *putrid* ſymptoms, he confeſſes, that, in ſeveral inſtances, in the beginning of the epidemic, he was at a loſs how to proceed. The great reſemblance of the diſeaſe to the *angina maligna*, and the ſubjects being chiefly the young and the delicate, prevented all thoughts of bleeding. When called early, therefore, while the action of the veſſels continued ſtrong, after directing the patient's legs and feet to be bathed in warm water, he

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gave emetic tartar, in ſuch doſes as to vomit; and afterwards to keep the belly open; directing detergent gargles to be injected into the *fauces* milk-warm. By theſe means a great deal of bile was frequently voided; the fever abated; the throat rendered eaſier; and the diſeaſe was either removed at once, or yielded to ſuch preparations of the bark as the patients could be prevailed upon to take.

But whatever ſigns of inflammation might appear in the beginning, the diſeaſe, when malignant, ſoon aſſumed a putrid form. When called in this ſtate of the diſeaſe, when it approached to the nature of the *angina maligna*, which was known from the appearance of the ſloughs, the bloated countenance, the feeble pulſe, and the ſwelling of the parotid glands, together with the tumefaction of the neck, our Author was deterred from giving *emetic tartar*, and therefore placed his chief confidence in the Peruvian bark, antiſeptic gargles, and a cordial regimen. In ſuch a ſtate of the diſeaſe, this method was commonly attended with ſucceſs, when applied in time. But, in ſome inſtances, we are told, that from the combination of *putrid* and *inflammatory* ſymptoms, this powerful medi-

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cine was found ineffectual; and thofe invariably recovered beft, whofe cafes would admit of antimonials in the beginning.

In the dropfical ftate of the difeafe, our Author directs purgatives and diuretics, with the ufe of the bark during intervals. The purgative from which he found moft advantage, was calomel varioufly combined with fquills. When this ftate of the difeafe was accompanied with fever, which, we are told, was frequently the cafe, he firft gave emetic tartar in naufeating dofes, and afterwards an infufion of the bark, made with boiling water, joined with *fal diureticus*, or *acetum fcilliticum*. When the patients laboured under rattling breathing, and peripneumonic fymptoms; befides thefe remedies, blifters were applied to the fides, and betwixt the fhoulders. Thefe methods, we are informed, were always attended with fuccefs, unlefs the patient laboured under a dropfy of the cellular fubftance of the lungs.

In the fourth fection, Dr Clark illuftrates the nature of this fingular epidemic, and the method of cure, by the relation of particular hiftories. We are here prefented with eleven cafes in which the fcarlet fever was attended

with

with mild ulcerations of the throat; twelve cafes in which it was attended with gangrenous ulcers of the throat; and laftly, fix cafes of the dropfical fwellings confequent on the difeafe.

In the fifth fection, we are prefented with an account of the fuccefs of the practice, which our Author has recommended in the fcarlet fever; and with a relation of the unfuccefsful cafes, with a view farther to explain the malignant nature of the epidemic; and to afford the medical reader an opportunity of judging of the advantages of the plan of treatment. From this account it appears, that of *thirty-fix* patients whom the Author attended in private practice, *thirty-two* were reftored to health, and *four* died: And of *ninety-five* who came under his care at the Difpenfary, *eighty-one* returned thanks for their cure, *one* was difcharged for irregularity, and in *thirteen* the difeafe terminated fatally.

Our Author concludes this part of the work with the following inferences, which we fhall tranfcribe, as they appear to us to have derived their origin from careful obfervation.

1. "The fcarlet fever is a contagious difeafe, and almoft always attended with a fore throat, which is fometimes eryfipelatous, fometimes ul-

cerated, and ſometimes of a putrid and gangrenous nature. On the 1ſt, 2d, 3d, or 4th day, a red eruption appears upon the ſkin, and after continuing for three, four, or more days, goes off in branny or thick broad ſcales; and after the ceſſation of fever, the diſeaſe frequently terminates in dropſy."

2. "The ſcarlet fever may appear at any time of the year, but it moſt commonly begins in ſummer or autumn; and generally continues throughout the winter."

3. "Although great diverſity obtains in the ſcarlet fever, yet the moſt important diſtinctions in practice are to aſcertain, 1. When the diſeaſe is of an inflammatory nature; and, 2. When it is attended with a diſpoſition in the throat in particular, and in the ſyſtem in general, to putrefaction."

4. "In the treatment of the mild ſpecies of ſcarlet fever, as deſcribed by Sydenham, little more is neceſſary than a proper attention to regimen."

5. "In the ſcarlet fever, attended with eryſipelatous inflammation of the throat, without ſloughs or ulcerations, antimonials given in ſuch doſes as to prove gently emetic, an antiphlogiſtic

ſtic regimen, and detergent gargles, are the chief remedies to be depended on."

6. "In the ſcarlet fever attended with a mild ulcerated ſore throat, in the beginning, and while the action of the veſſels is ſtrong, the ſame remedies as above are indiſpenſibly requiſite; and as ſoon as the action of the veſſels is abated, the chief dependence ought to be placed in the Peruvian bark."

7. "When the ſcarlet fever is attended with gangrenous ulcers in the throat, and a diſpoſition to putrefaction in the ſyſtem, the bark ought to be preſcribed in large doſes, and an antiſeptic cordial regimen purſued from the beginning."

8. "Though the above general rules, with reſpect to the method of cure, are the reſult of experience; yet, in a diſeaſe which aſſumes ſuch a variety of ſymptoms and appearances, the proper method of treating particular caſes muſt depend upon the ſagacity and judgment of the Phyſician, and a careful attention to the nature of the epidemic."

To this part of Dr Clark's Work is added a Poſtſcript, containing a ſhort account of the Scarlet Fever and Sore Throat, from the trea-

tiſe lately publiſhed by Dr Withering, and from the ſecond volume of Dr Cullen's *Firſt Lines of the Practice of Phyſic*; and we are alſo here preſented with an analyſis of Dr Cotton's letter to Dr Mead *on a particular Scarlet Fever* prevalent at *St Albans* near *London*, in the year 1748; which ſeems to have been eſſentially the ſame epidemic ſo well deſcribed by Dr Fothergill under the title of the *Putrid Sore Throat*. Our Author introduces Dr Cotton's account with more particular pleaſure, as their ſentiments perfectly coincide concerning the impropriety of altering the name of the diſeaſe.

This Work is concluded with an Appendix, containing tables of the diſeaſes of the patients admitted to the Newcaſtle Diſpenſary under the Author's care, during the ſpace of two years, together with remarks on the method of improving medical returns. For his remarks, however, on this ſubject, after the length to which the preſent article has already extended, we muſt now refer our reader to the Work itſelf. And although we have endeavoured to give a pretty full account of it, yet we may conclude with obſerving, that it every where abounds with obſervations of ſuch importance in practice,

practice, as cannot fail amply to reward the labour of a careful perusal.

X.

Ed. Sandifort, *Medicinæ, Anatomes, et Chirurgiæ, in Academia* Batava, *quæ* Leidæ *est, professoris, Observationes Anatomico Pathologicæ;* Liber tertius. 4*to.* Lugduni Batavorum.

IN this publication we are favoured with a continuation of ingenious observations, the preceding parts of which were communicated to the public a considerable time ago.

The first article contains a very particular description of an umbilical hernia in a child who died almost immediately after birth. The mother in the third month of pregnancy had received a violent fall upon ice, to which severe pains succeeded, and continued till the end of the seventh month, when she was delivered of this child.

Our Author having obtained the liberty of dissecting the body, he not only gives us a most accurate account of the different appearances observed in it; but to render the whole as in-

telligible as poſſible, a complete ſet of plates are ſubjoined, in which very exact views of the different parts are exhibited.

In this umbilical tumour, the liver, ſpleen, and part of the ſtomach and inteſtines, were contained, and various preternatural appearances were detected in the heart, kidneys, and bladder; but the nature of this publication will not admit of our entering into ſuch a particular detail of theſe as would be neceſſary for conveying an exact knowledge of the ſeveral particulars.

In chapter ſecond, we are favoured with a very minute account of the diſſection of a body, in which a great proportion of the pia mater was found oſſified; no detail however is given of the effects produced by this circumſtance, during the latter part of the patient's life.

Chapter third, contains the particulars of a caſe of ſuppreſſion of urine which ended fatally, and on diſſection a ſtone impacted in the urethra was diſcovered to be the cauſe.

Chapter fourth is entitled, "De calculo lacrymarum viis exſecto;" of this the following are the particulars:

A young lady had complained for ſome time of a ſmall tumour on the under palpebra, and near

near the internal angle of her left eye. It was attended with ſome pain, a conſtant diſcharge of tears over the cheek, and now and then, eſpecially in the morning, a quantity of purulent matter was evacuated; various remedies had been tried, but with no kind of advantage.

On examining the tumour, it was found to be hard, and a ſmall orifice was obſerved, at a little diſtance from the *punctum* of that eye-lid, from whence a quantity of pus was diſcharged by preſſure; but no evacuation of this kind had any influence in diminiſhing the ſize of the ſwelling.

On different trials it was found, that although the tears ſtill came over the cheek, yet the paſſage into the noſe was not rendered altogether impervious, as by *Anells'* inſtruments, injections were made to paſs from the *punctum* into the noſe. But the tumour having now continued for a conſiderable time, and there being no appearance of removing it by external applications, it was at laſt determined to lay it open to the bottom. On doing ſo, a ſmall pyriform ſtone was extracted, and the ſore being properly dreſſed, a complete cure was very quickly obtained.

Chapter fifth, enumerates the particulars of a diſſection, in which the peritoneum was not only thickened to a great degree, but in ſome parts was even in a cartilaginous ſtate; and the liver, ſpleen, ſtomach, large and ſmall inteſtines, were found ſo firmly united into one maſs, as to render it impoſſible, even by diſſection, to ſeparate the one from the other.

Chapter ſixth, contains an account of an abortion in the fifth month of pregnancy.

Chapter ſeventh, gives the particulars of a diſſection, in which the two kidneys were found firmly united into one maſs, but with all the parts of each perfectly diſtinct.

Chapter eighth, enumerates various inſtances of two or more of the bones of the ſkull being firmly united, either from the ſutures being altogether obliterated, or from their having been entirely wanting.

Chapter ninth, is entitled, "De oſſiculis ſuturarum." Here our Author takes occaſion to prove, that the diſcovery of the oſſa triquetra has in general been very improperly attributed to *Wormius*, for they were diſtinctly deſcribed by Bartholin at leaſt twelve years before Wormius pretends to have firſt ſeen them; the firſt account

count given of them by the latter not having been printed till the year 1640; whereas it is evident that Bartholin had obſerved them in the year 1628. Various inſtances are here related by our Author, of ſkulls, in his collection, remarkable for the number and ſize of the bones.

The tenth and laſt ſection, is entitled, "De oſſibus, diverſo modo, a ſolita confirmatione abludentibus."

As anatomiſts are daily diſcovering *luſus naturæ*, in diſſecting the ſofter parts of the body; ſo when we examine the ſkeleton with attention, various irregularities in its conformation are detected. Our Author here preſents us with a number of inſtances of this kind, which from time to time have occurred to him in the formation of his collection.

XI.

A Phyſical Inquiry into the Cauſe and Cure of Fevers. By Garret Huſſey, M. D. *8vo.* Dublin.

AN accurate inveſtigation of the remote or occaſional cauſes of fevers, being highly neceſſary in practice, our Author, before proceeding

ceeding to the immediate confideration of thefe diforders, gives a very minute detail of fuch circumftances as, under different modifications, are to be confidered as the moft frequent caufes of febrile affections.

Thefe are, air, food, exercife and inaction; fleep and watchfulnefs; the natural evacuations of the body, with their feveral ftates of obftruction; and laftly, the various paffions by which the body is affected.

After confidering the general properties of air, our Author concludes that part of his fubject with fome remarks upon fixed air. The term *fixed air*, he obferves, is in general very improperly ufed. Whenever the integral parts of a fimple element are clofely combined, fuch as fire, water, air, and earth, conftituting by their union a complex body, neither of them can retain, in fuch fituations, thefe properties which fpecify them fingly. Air, in particular, lofes that compreffibility and elaftic force, which diftinguifh it in a ftate of aggregation. We call it then *fixed air*, and the expreffion is very proper; but it is difficult to conceive why the fame term fhould be applied to that vapour which arifes from the decompofition of any body. This vapour, far from

from being fixed, is volatile; and, far from being formed only of air, is a compound of feveral fubftances; for the fame force, our Author remarks, which is fufficient to difunite the conftituent parts of any body, is fufficient to diffipate in the form of vapour fuch of them as are volatile; and hence, if fixed air and vapour were fynonimous terms, we fhould admit as many fpecies of the former as there are bodies that contain it.

Dr Huffey differs widely from thofe who confider fixed air as the bond of union of bodies. He confiders every particle of a body to be equally neceffary with fixed air, for the union or exiftence of that body; for as all elementary particles have a reciprocal attraction, it muft be an abufe of words, he thinks, to call any one of them the cement or bond of union.

It is true, he fays, that lime and the calces of metals, recover their original nature, when they receive the vapour which arifes from the decompofition of another body. If, indeed, calcination deprived metals, and calcareous ftones, of nothing elfe than their elementary air, and if the vapour that reduces them contained nothing elfe, in that cafe there would be fome foundation for admitting

admitting the cementing quality of this element. But neither of theſe ſuppoſitions are well founded: For the operation neceſſary for converting metals and calcareous earths into a calx, deprives them of other volatile principles as well as of air; and the vapour which reduces them, contains not only air, but the reſt of what they had loſt. As a proof of this, our Author remarks, that of all the vapours uſed in ſuch proceſſes, there are none ſo fit as thoſe which are inflammable, and which of courſe are replete with elementary fire or phlogiſton.

As bodies in the mineral kingdom recover their primitive form, when they receive the volatile principles which they had loſt during their decompoſition, it has occured to ſome, that, in ſimilar circumſtances, the ſame change would be wrought in the animal and vegetable ſubſtances which are decompoſed by putrefaction. To determine whether there really be any analogy of this ſort, a train of experiments have been made; and upon a partial view, it may ſeem that the event has been favourable to the theory in queſtion. But, on a more minute inveſtigation, our Author is of opinion, that all the antiſeptic effects which have uſually been attributed to fixed air,

air, depend almoſt entirely on the nature of the particles with which the air happens to be impregnated, and not merely upon the air itſelf. For although putreſcent, vegetable and animal ſubſtances, have been rendered ſweet by ſome vapours, yet others have the power of producing quite a contrary effect, as every one will be convinced, who leaves a piece of freſh meat expoſed to the corrupted ſteams of any body in an actual ſtate of putrefaction.

This opinion is much confirmed, when we conſider, that the ſubſtances which afford the greateſt proportion of an antiſeptic vapour, are moſt commonly antiſeptic themſelves in a very high degree. Such are mineral acids, and the products of fermentation, tartar, vinegar, and ſpirits of wine; and, if the antiſeptic powers of any body depended merely on the proportion of fixed air contained in it, conſiderable deviations ought neceſſarily to be introduced in various points of the preſent eſtabliſhed practice. In that caſe, our Author remarks, that ſalt beef, which is generally ſuppoſed to be very productive of ſcurvy, would be had recourſe to as an excellent remedy for its cure.

In treating of digeſtion, various arguments are introduced againſt the doctrine of fermentation: At the ſame time, that attempts are made to prove, that this proceſs depends almoſt ſolely, if not entirely, on the ſolvent powers of the ſtomach and menſtruum contained in it. So far from the fermenting proceſs being neceſſary for digeſtion, it never occurs, our Author ſuppoſes, but as a concomitant of indigeſtion; the ſymptoms and appearances of a complete indigeſtion being exactly ſuch as are obſerved in alimentary mixtures in a ſtate of fermentation.

In conſidering the ſeveral occaſional cauſes of fever, Dr Huſſey endeavours to prove, that they all tend, in a greater or leſſer degree, to the production of ſuch a ſtate of the fluids, as muſt neceſſarily occaſion an obſtruction to their circulation; and it is this obſtruction, together with the reaction of the blood-veſſels, that muſt thereby be produced, which he thinks conſtitutes the generical nature of fever. With reſpect to the ſpecific differences of fever, he has no doubt of their depending ſolely upon the particular changes induced upon the circulating fluids; which, however different from one another,

ther, have one thing in common, that of disturbing the freedom of circulation.

The only changes which our Author supposes can be made in these fluids, so as to render them unfit for a due circulation, may be reduced to three, *viz.* a viscidity of the chyle; a coagulation of the serum; and a broken texture of the red globules. It may seem, he says, that the two first changes bear the same signification; there is, however, he observes, a real difference, for when the chyle is viscid, all the rest of the humours must be poor and ropy; whereas when the serum is coagulated, the blood-globules have a great degree of firmness. And again, the fibres are weak and relaxed in the first case; but in the second, they are strong and elastic; besides, the chyle, though viscid, can never be made hard, whilst the serum may be coagulated so as nearly to acquire the consistency of leather.

Continued fevers are divided by our Author into the inflammatory, the putrid, and compound fevers. The first of these, he supposes, proceeds in every instance from a siziness of the blood; the putrid fever, from a dissolution of the humours; and the compound fever, from a combination of the two.

As the method of cure in every fever is to be regulated entirely by an accurate knowledge of the caufe; and as the caufe can never be exactly detected but from the appearance of the blood; we are defired, therefore, on the firft formation of fever, always to draw off a fmall quantity of blood. If the blood appears firm and fizy, there can be no room to doubt of the fever being of the inflammatory kind; if it is of a loofe, foft, broken texture, then the fever is evidently of the putrid kind; and again, when the blood, after cooling, is covered with a thin pellicle, which does not refift the preffure of the finger, and when the blood which lies under this pellicle is not quite fo denfe as that which is drawn in a fever purely inflammatory, in that cafe, the fever is denominated compound.

In the cure of *inflammatory fever*, blood-letting is recommended as the remedy chiefly to be depended on; and the quantity to be difcharged, is directed to be regulated, not only by the violence of the fymptoms, but by the confiftency of the fize; which laft circumftance, our Author feems to confider as the moft material index for all our practice, in the treatment of this fpecies of fever.

Together with blood-letting, cooling, laxative, diuretic medicines are recommended; and particularly, ſuch articles as are known moſt effectually to aſſiſt perſpiration: The grand object of all theſe being the expulſion, by the ſeveral outlets, of the ſizy particles of the blood, which are too groſs to move eaſily forward in the common courſe of circulation.

Warm alexipharmac medicines are much condemned by our Author, as tending, by the increaſe of heat which they occaſion, to produce a farther inſpiſſation of the humours. But bliſters, although they do probably produce a tranſitory increaſe of heat, and from that circumſtance might be ſuppoſed to be improperly uſed here; yet it is certain, our Author remarks, that they give great relief in inflammatory fevers; and this they do, he ſuppoſes, by the active parts of the cantharides being abſorbed into the circulation, where, by their attenuating properties, the ſizineſs of the humours comes to be conſiderably diminiſhed.

For effecting a total diſſipation of this ſizineſs of the blood, dilution with watery drinks is much recommended. Water alone, however, not acting as a proper ſolvent for ſize, a quan-

tity of faccharine, or acid vegetable juices, are defired to be added to it.

In the cure of *putrid fevers*, blood-letting carried to any extent is much condemned by our Author; but a fmall bleeding at firft, he confiders as abfolutely neceffary; for unlefs by feeing the blood, he thinks it is impoffible, at an early period of the difeafe, to form a true diagnoftic.

Gentle emetics, and laxatives, are defired to be given at proper intervals, through the whole courfe of the difeafe, fo as effectually to evacuate thofe putrefcent humours which, in fuch fevers, are always collected in the ftomach and bowels. No violent medicines, however, fhould be ufed; and we are here particularly cautioned againft the ufe of James's powder, the operation of which, in fuch fevers, our Author confiders as highly pernicious.

Bliflers, by the alkaline particles of cantharides which they introduce to the circulation, being very apt to produce a diffolution of the blood, are therefore condemned as improper in every inftance of putrid fever; excepting perhaps in the beginning of the difeafe, when, by the drain they produce, and which is frequently

kept

kept up during the courſe of the fever, they may be of ſome ſervice; and, as at this period the diſſolution is not ſuppoſed to be much advanced, they may be had recourſe to, Dr Huſſey imagines, without any kind of riſk.

In the compound fever, which our Author conſiders as a complication of the inflammatory and putrid fevers, the firſt indication of cure which he recommends, is to attenuate the ſizineſs of the blood, which, in the beginning of the diſeaſe, always prevails; and the ſecond, is to guard againſt the progreſs of the putrefactive ferment, which, in the more advanced ſtages of this fever, is always ſure to occur. To cure the compound fever, we ſhould begin with thoſe means which we employ advantageouſly in the treatment of fevers purely inflammatory; and ought to end with thoſe which are found ſucceſsful in the cure of what is merely putrid.

Dr Huſſey concludes his obſervations on every ſpecies of fever, with different caſes, by which he endeavours to eſtabliſh the propriety of the principles laid down. And having made ſome remarks on the nature and cure of intermittent and remittent fevers, he concludes the whole with a ſhort but accurate diſſertation on the va-

rious febrile affections to which lying-in women are liable.

XII.

Experiments establishing a Criterion between Mucaginous and Purulent Matter; and an Account of the retrograde Motions of the absorbent Vessels of animal Bodies in some Diseases. 8vo. Lichfield.

THE work before us was written some years ago by a very ingenious young gentleman, the late Mr Charles Darwin of Lichfield. These papers are now published from the manuscripts which he left behind him. The Editor of the present work, Dr Darwin of Lichfield, informs us, in a note, that he has in his possession some other ingenious papers by the same Author, which it is to be hoped will soon be published.

The present publication, as must appear from the title, consists of two Parts. The first Part, which contains the experiments establishing a criterion between pus and mucus, was presented to the Æsculapian Society of Edinburgh in the year 1778, who unanimously conferred upon the Author of it their prize-medal for that year. The experiments themselves do not admit of an analysis;

lysis; and, of the conclusions drawn from them, we have already given a full account in a former number of this Work. It will now, therefore, be sufficient to repeat the general conclusion, which is in the following words: When any one wishes to ascertain the composition of expectorated matter, let him dissolve it in vitriolic acid, or in caustic alkaline lixivium; and then add pure water to both solutions. If there be a fair precipitation in each, he may be assured that some pus is present. If in neither a precipitation occurs, it is a certain test, that the matter is entirely mucus. And if it cannot be made to dissolve in the alkaline lixivium, there is also reason to believe that it is pus.

In the second, which is by much the most considerable Part of this Work, Mr Darwin endeavours to shew, that the phænomena of various diseases can only be explained upon the supposition of a retrograde motion of the absorbent vessels.

After giving, in the first section, a distinct account of the absorbent system in general, he proceeds to shew, in the second, that the valves of the absorbent vessels may suffer their fluids to regurgitate in some diseases. He observes, that

the many valves which occur in the progreſs of the lymphatic and lacteal veſſels, would indeed ſeem inſuperable objections to the regurgitation of their contents; but as mercury, water, or ſuet, can be eaſily made to paſs through theſe veſſels in a contrary direction to the natural courſe of their fluids, and as theſe veſſels, with their valves, are undoubtedly endued with life, he thinks it probable, in ſome diſeaſes where the valves and veſſels are ſtimulated into unnatural exertions, or are become paralytic, that during the diaſtole of the part of the veſſel to which the valve is attached, the valve may not be ſo completely cloſed as to prevent the relapſe of the lymph or chyle.

The mouths of the lymphatics, he obſerves too, ſeem to admit water to paſs through them after death, more eaſily the inverted way than in the natural courſe, ſince an inverted bladder readily lets out the water with which it is filled. And as the ſtrong valves with which both orifices of the ſtomach are furniſhed, and likewiſe the valve of the colon, are frequently known to admit of a regurgitation of the contents of theſe viſcera, the poſſibility of ſuch an occurrence in the lymphatic ſyſtem is thereby put beyond a doubt.

By

By Dr Haller's microfcopic experiments too, it is rendered certain, that in the veins which we know to be endowed with valves, a regurgitation of their contents is very eafily induced; he having obferved, that in dying animals, a retrograde motion of the blood is produced from the heart itfelf to the very extremity of the limbs. From the ftricteft analogy, therefore, our Author concludes, that if the courfe of the fluids in the lymphatic veffels could be fubjected to microfcopic obfervation, they would alfo, in the difeafed ftate of the animal, be feen to repafs the valves, and the mouths of thofe veffels which had previoufly abforbed them.

In fection third, our Author endeavours to fhew, that as the inteftinal abforbents are now known to join with the urinary lymphatics by frequent anaftomofes; we are hence, on the fuppofition of a retrograde motion of thefe veffels, enabled to account for the daily inftances that occur, of fluids paffing from the ftomach into the bladder much more quickly than they could poffibly do through the common courfe of the circulation. In Etmuller's Works, various inftances are recorded, where fimple water, wine,

wine, wine with ſugar, and emulſions, were diſcharged, by urine, unchanged.

Dr *Kratzenſtein* put ligatures on the ureters of a dog, and then emptied the bladder by a catheter; yet, in a little time, the dog drank greedily and made a quantity of water. And in the Philoſophical Tranſactions for the year 1670, a ſimilar experiment is related with the ſame event. The following experiment too, which was made under the eye of our Author, tends greatly, he thinks, to confirm this opinion.

June 14. 1772. A friend of Mr Darwin's, on drinking repeatedly of cold ſmall punch, till he began to be intoxicated, made a quantity of colourleſs urine. He then drank about two drams of nitre diſſolved in ſome of the punch, and eat about two ſtalks of boiled aſparagus. On continuing to drink more of the punch, the next urine that he made was quite clear and without ſmell; but, in a little time, another quantity was made, which was not quite ſo colourleſs, and had a ſtrong ſmell of the aſparagus. He then loſt about four ounces of blood from the arm, but the ſmell of aſparagus was not at all perceptible in the blood, neither when

when fresh taken, nor the next morning; yet this smell was strongly perceived in the urine which was made just before the blood was taken from the arm.

Some bibulous paper, moistened in the serum of this blood, and suffered to dry, shewed no signs of nitre by its manner of burning; but some of the same paper, moistened in the urine, and dried, on being ignited, evidently shewed the presence of nitre. This blood and the urine stood for some days exposed to the sun in the open air, till they were evaporated to about a fourth of their original quantity, and began to stink. The paper which was then moistened with the concentrated urine, shewed the presence of much nitre by its manner of burning, whilst that moistened with the blood shewed no such appearance. Hence our Author thinks it may be clearly inferred, that certain fluids, at the beginning of intoxication, find another passage to the bladder than the long course of the arterial circulation.

In section fourth, the doctrine here advanced, of a retrograde motion of the lymphatics, is applied towards the explanation of the phænomena of diabetes and of some diarrhœas. All the

branches

branches of the lymphatic fyftem, our Author obferves, have a certain fympathy with each other, infomuch, that when a branch is ftimulated into any unufual motion, fome other branch has its motions either increafed or decreafed, or inverted at the fame time. Thus, when one drinks a moderate quantity of vinous fpirit, the whole fyftem acts with more energy, by concert with the ftomach and inteftines, as is feen from the glow on the fkin, and the increafe of ftrength and activity; but when a greater quantity of this inebriating material is drunk, at the fame time that the lacteals are excited into greater action to abforb it, the urinary branches of the abforbents which are connected with the lacteals by many anaftomofes, may have their motions inverted, and a great quantity of pale unanimalifed urine will be difcharged.

If this ingurgitation of too much vinous fpirit fhall often occur, the urinary branch of abforbents at length gains a habit of inverting its motions whenever the lacteals are much ftimulated; and the whole, or a great part of the chyle, is thus carried to the bladder, without entering the circulation, and the body becomes emaciated. In this fpecies of the difeafe, which may

may be termed the *chyliferous diabetes*, the urine is ſweet, and of the colour of whey; which are circumſtances that diſtinguiſh it ſufficiently from every other ſpecies of the diſorder.

The purging ſtools occaſioned by expoſing the naked body to cold air, or ſprinkling it with cold water, originate, our Author remarks, from a ſimilar cauſe; for the mouths of the cutaneous lymphatics, being ſuddenly expoſed to cold, become torpid, and ceaſe, or nearly ceaſe, to act; whilſt, by ſome kind of ſympathy, the inteſtinal lymphatics invert their motions, and immediately what was previouſly abſorbed is returned into the inteſtines. An obſtructed perſpiration merely, Mr Darwin obſerves, is not ſufficient to account for this phænomenon, as it frequently happens, that at the very inſtant the body is expoſed to the effects of cold air, an unuſual movement is felt in the bowels, which could not, he thinks, from that circumſtance, be ſo inſtantaneouſly produced.

In ſections fifth, ſixth, and ſeventh, our Author proceeds to explain upon the ſame principle, the phænomena of dropſies, of cold ſweats, and of the tranſlations of matter, of chyle, of milk, and of urine. The operation of purging drugs,

drugs, applied outwardly, is thus likewife accounted for.

In fection eighth, various circumftances are enumerated, by which the fluids that are effufed by the retrograde motions of the abforbent veffels may be diftinguifhed. Section ninth, contains a fynopfis of difeafes, fuppofed by our Author to originate from the retrograde motions of the abforbent veffels. Section tenth, contains anfwers to fuch objections as our Author fuppofes may be made to his theory; and in the eleventh fection, he enumerates various caufes which induce the retrograde motions of animal veffels, and the medicines by which the natural motions may be reftored.

As Mr Darwin confiders debility as the principal caufe of the retrograde motion of veffels; and as animal debility, he thinks, is owing to a defect of ftimulus, or of irritability; when the vafcular mufcles, therefore, are not excited into their due action by the natural ftimuli, we fhould exhibit, he remarks, thofe medicines which poffefs a ftill greater degree of ftimulus; amongft thefe are, the fœtids, volatile aromatics, bitters, metallic falts, opiates, wine, moderate exercife, cheerfulnefs of mind, change of air to a warmer country,

country, and perhaps occaſionally the external ſtimulus of bliſters.

Towards the end of this publication, ſeveral caſes of dropſical complaints are related, in which the fox-glove, or *digitalis purpurea*, was exhibited. In the greateſt part of theſe, this medicine acted violently both as a cathartic, emetic, and diuretic; in ſome, theſe evacuations proved ſalutary, but in others they either had no apparent influence, or produced no other effect than that of reducing and weakening the patient's ſtrength. The two following caſes, ſelected from the whole, will ſerve as examples of its effects.

A lady between forty and fifty years of age, who had been indiſpoſed ſome time, was then ſeized with cough and fever, and afterwards expectorated much digeſted mucus. This expectoration ſuddenly ceaſed, and a conſiderable difficulty of breathing ſupervened, with a pulſe very irregular both in velocity and ſtrength; ſhe was much diſtreſſed at firſt lying down, and at firſt riſing; but, after a minute or two, bore either of theſe attitudes with eaſe. She had no pain or numbneſs in her arms; ſhe had no hectic fever, nor any cold ſhiverings, and the urine

was

was in due quantity, and of the natural colour.

The difficulty of breathing was twice confiderably relieved by fmall dofes of ipecacuanha, which operated upwards and downwards, but it returned in a few days. She was then directed to take the fox-glove in decoction, prepared by boiling four ounces of the frefh leaves, from two pints of water to one pint, to which was added two ounces of vinous fpirit; fhe took three large fpoonfuls of this mixture every two hours, till fhe had taken it four times; a continued ficknefs fupervened, with frequent vomiting and a copious flow of urine; thefe evacuations continued at intervals for two or three days, and relieved the difficulty of breathing. She had fome relapfes afterwards, which were again relieved by the repetition of the decoction of fox-glove.

A tradefman about fifty years of age, became weak and fhort of breath, efpecially on increafe of motion, with pain in one arm about the infertion of the biceps mufcle. In the night he fometimes made an unufual quantity of pale urine. He took calomel, alum, and Peruvian bark, but all his fymptoms increafed. His legs began

began to fwell confiderably; his breathing became more difficult, and he could not lie down in bed, but all this time he made a due quantity of ftraw-coloured urine.

The decoction of fox-glove was given as in the preceding cafe; it operated chiefly by purging, and feemed to relieve his breathing for a day or two; but it alfo feemed to contribute to weaken him. He became fome weeks thereafter univerfally dropfical, and died comatofe.

We have thus endeavoured to give fome account of the doctrine contained in this Effay; and although perhaps but few of our readers may at firft be difpofed to adopt this idea of retrograde motion in the abforbents, yet we are perfuaded they will in general admit, that it is both new and ingenious. But, for a more fatisfactory view of the opinion, as well as of the arguments by which it is fupported, we muft refer them to the Work itfelf. And it will be no unpleafing gratification to their curiofity, to perufe a fhort account of the life of the Author, which the Editor has annexed to the publication.

XIII.

Clinical Experiments, Histories and Dissections. *By* Francis Home, M. D. *one of his Majesty's Physicians, Fellow of the Royal College of Physicians of Edinburgh, and Professor of Materia Medica in the University of Edinburgh.* 8*vo.* Edinburgh.

THE Work before us, which we formerly took an opportunity of announcing, contains the result of industrious and accurate observation for the space of several years. While ingenious speculations afford pleasure to the inquisitive mind, the united efforts of unwearied attention and solid judgment, on subjects strictly practical, cannot fail to afford the highest satisfaction to those engaged in the actual exercise of the profession. Such however is the nature of the volume now before us; and we have little doubt that the conclusions here drawn from extensive experience, will be found conducive to the improvement of medicine.

It has long been a matter of dispute, and it is unquestionably of the utmost importance in the practice of physic, to determine at what time the

the Peruvian bark may be exhibited with greatest advantage in the cure of intermittent fevers. On this subject, as the result of many trials, 14 of which are here particularly related, Dr Home concludes, that the Peruvian bark is more efficacious in stopping the paroxysms of an intermittent, when it is given soon after a fit, than when exhibited a short time before it. And he even concludes, that from this latter mode of exhibition, it adds to the severity of the succeeding paroxysm.

From observing that the Peruvian bark is most successful when it is given at the greatest distance from the fit, Dr Home infers, that a considerable time is required for its operation; and from this he thinks it highly probable, that its effects do not arise from an action on the stomach, or on its nerves alone, but principally depend on its entering the vascular system.

He finds, that there is no difference in the effects of bark given after the fit, whether the type be quotidian or tertian. He thinks, therefore, that the distinctions of intermittents, so often mentioned by medical writers, are of little use in practice. And as the different kinds so often alternate with each other, he concludes,

that the cause of their different appearances is not owing to different miasmata, but probably to some more changeable circumstances of the patient.

In the second section, the Author relates many experiments made with different remedies in the typhus nervosus. From nine different trials with the tincture of cantharides, it appears, that this medicine taken to the extent of 20 drops thrice a-day, is a very safe remedy. He thinks, that in most of the cases there could be no doubt that the medicine was of great utility; but he observes, that more experiments are still required to ascertain its value. From his experiments with blisters, he concludes, that they are of little use in typhus. Yet he considers them as of the greatest utility in relieving the severe headach which always attends it, when they are applied to the temples. And this mode of application, while it is in many respects more convenient than blisters to the head, he thinks, supersedes the use of that practice.

From the result of many trials made with antimonial medicines, Dr Home concludes, that James's powder is a more valuable remedy in typhus than emetic tartar. He finds, that the effects

effects of tartar emetic, as an evacuant in particular, are never ſtronger than thoſe of James's powder; and that it is by no means ſo uſeful in typhus as in ſynochus. From this circumſtance, without pretending to ſettle the mode of operation, he thinks we may negatively conclude, that antimonials do not cure fevers by evacuation: From ſeveral circumſtances, he infers that it is rather by a general ſtimulus.

From his trials with opiates, he concludes, that they procure reſt in typhus, without any diſadvantages attending their uſe. He thinks, that in every caſe of ſuch fevers, opium is more to be depended upon than camphor, caſtor, or the ſal ſedativum Hombergii; and particularly, that it is more neceſſary and more uſeful than theſe ſedatives where the patient is affected with looſeneſs or cough.

In the ſixth ſection, Dr Home relates many experiments upon ſome remedies uſed in phthiſis pulmonalis. From three trials with the vitriolic acid, our Author concludes, that little advantage can be obtained from it. He finds, that it tends very much to promote purging, even although joined with mucilage of gum arabic, and accompanied with opiates. From a trial made with

alum, he found that it quickened the pulſe without producing any good effect; and that it had no power in curing the diſeaſe. Former experience had led him to conſider the Peruvian bark as being hurtful in phthiſis, and this opinion he found confirmed by another trial. From ſtarch, as a demulcent and incraſſant, he found ſome benefit; and he thinks that it may be uſeful where the expectoration is thin, in ſmall quantity, and attended with much tickling in the trachea and fauces. From different trials with mephitic air, it appeared to be of ſome uſe: But he thinks that more experiments are neceſſary to aſcertain its effects, and the degree of credit which it deſerves.

In the ſeventh ſection, Dr Home relates three hiſtories of a ſingular affection, the melæna or morbus niger. From theſe hiſtories he concludes, that the diſeaſe does not depend upon the atra bilis, as has commonly been imagined, but that it is owing to blood effuſed from the meſeraic veins. In the three caſes which are here related, although the criſis did not happen in all of them exactly on the ſame day, yet there appeared to be a very great coincidence in point of time with the criſis of fevers in general, one terminating

terminating on the eighth, and two others on the fourteenth day. The firſt patient was cured by the continuation of purging, and the ſecond by ſweat and thick urine; but the third had no evident critical evacuation.

With reſpect to the cure, he conſiders bleeding as neceſſary, if the pulſe will admit of it; he thinks that emetics are always hurtful. He concludes, that gentle laxatives are beneficial; and he found benefit from the vitriolic acid, when given with mucilage of gum arabic, which he recommends as being the article beſt fitted for covering its taſte, and diminiſhing its effects on the primæ viæ.

From ſeveral experiments which he made with the rhododendron chryſanthemum of the Pharmacopoca Roſſica, which has lately been very warmly recommended for the cure of rheumatiſm, he found that it affected the head with pain and giddineſs; that it produced nauſea, and ſometimes opened the belly; and that it produced plentiful ſweat when the ſtate was not inflammatory. He found that it produced a diſpoſition to ſleep; and he pronounces it one of the moſt powerful ſedatives which has yet been diſcovered. For, in moſt of the trials, it made

the pulſe remarkably ſlow, and in one reduced it to thirty-eight ſtrokes in the minute. He conſiders it however as being, in the cure of rheumatiſm, a medicine much inferior to ſeveral others, particularly to the pulvis Doveri.

In the tenth ſection, Dr Home relates ſeveral trials made with Sir Hans Sloan's ointment for the cure of the leucoma. This ointment is prepared in the following manner:

℞. Tutt. ppt. unc. ſſ. lap. hæmat. ppt. ſcrup. i. aloes ſuccotr. levig. gr. vi. Margarit. ppt. gr. ii. leviga optime ſimul et miſce cum axung. viper. q. ſ. ut f. liniment. ophthalmicum. Of this ointment a little was applied twice a-day, if there was any tendency to inflammation, and if not, as often as they pleaſed. In the trials which he made with this ointment, although at firſt it excited conſiderable inflammation, yet it had at laſt the effect of removing the ſpeck, and reſtoring to the cornea its natural pellucidity; from which Dr Home concludes, that it is a medicine of much efficacy in a diſeaſe otherwiſe incurable.

In the eleventh ſection, Dr Home gives an account of a great variety of experiments made with different antiſpaſmodics. As an antiſpaſmodic,

modic, he employed blood-letting with ſucceſs in allaying idiopathic ſingultus; and he thinks that it may be conſidered as a general remedy in the cure of that diſeaſe. From his trials with valerian, he is inclined to pronounce it a weak and often a hurtful medicine. From the experiments alſo which he made with the folia aurantiorum, he is inclined to call in queſtion the antiſpaſmodic powers of that medicine. He draws alſo the ſame concluſion with regard to the cardamine pratenſis or cuckow flower.

With regard to the comparative powers of antiſpaſmodics in general, he thinks they may be referred to four claſſes. Under the firſt and weakeſt, he includes fol. aurant. flor. cardamin. artemiſia, peonia, viſcus quercinus, extractum hyoſcyami, caſtor, muſk, cup. ammon. and electricity. To the ſecond claſs, he refers camphora, calx of zinc, and bliſters; to the third, aſſafœtida, æther, and mercury; and to the fourth, Peruvian bark, opium, and blood-letting. But he concludes with obſerving, that particular antiſpaſmodics are ſuited to the cure of particular ſpaſmodic diſeaſes; and he remarks, that although his experiments have ſhewn this

this fact, they have not discovered the cause on which it depends.

As a remedy in paralytic cases, he made trial in six instances with the Doronicum Germanicum, or German leopard's bane, the arnica montana of Linnæus, which has of late been highly extolled by Dr Collins of Vienna, and some other Physicians. From these trials, however, he is not disposed to form a very favourable judgment of it; yet from its stimulating power in the primæ viæ, and on the affected muscles, he thinks there is reason to hope that it will be of some service. From the hot bath, when used to as great a degree of heat as the patients were able to bear it, he derived no benefit; and he is inclined to think, that the good effects derived from natural hot baths may depend on mephitic air or other impregnations.

In the twelfth section, seven cases are related of obstinate sciatica, five of which were cured, and the two others relieved by means of the oleum terebinthinæ. It was exhibited according to the following formula.

℞. Ol. tereb. drach. ii. mell. opt. unc. i. M. f. linct. cap. coch. parv. mane et vesp. superbibendo haust. potus communis tepidi. The sensible

ſible operation which Dr Home obſerved from this medicine was various. It often produced a ſenſe of heat in the ſtomach, and diminiſhed the appetite. It heated the part affected, and raiſed a peculiar ſenſation of pain there. It ſometimes proved diuretic; and when uſed in a great quantity, it brought on ſtrangury. Dr Home obſerves, that it is difficult to explain its operation; but, from the peculiar ſenſation of heat and pain which is felt in the part ſoon after each doſe, he is inclined to think that it acts topically.

In caſes of lumbago, a diſeaſe nearly allied to ſciatica, Dr Home derived great benefit from the following application.

℞. Camph. ſcrup. i. diſſolut. in ol. tereb. drach. ii. Sal cor. cerv. gr. xv. Pulv ſem. cymin. drach. ii. dein. add. ung. nervin. unc. ſſ. ſapon. nigr. com. unc. i. M. f. linim. extende ſuper alutam. et applic. lumbis. This liniment, which was renewed every three days, produced ſalutary effects in a ſhort time.

In the ſeventeenth ſection, Dr Home relates many experiments made with different remedies in different caſes of dropſy. After having given a ſhort hiſtory of the introduction of cream of tartar

tartar againſt ſuch affections, he relates particularly its effects in twenty caſes in which he tried it. Of theſe, it produced a complete cure in fourteen; and he remarks, that although the diſtemper be very liable to ſuffer a relapſe, yet this happened in none of theſe.

To determine its mode of operation, from aſcertaining which, he thinks, we may moſt certainly ſecure ſucceſs from the uſe of it, he ſtates the viſible effects of this medicine. In one or two inſtances, he obſerves, it excited vomiting; in general, it purged the patient twice or thrice in the day with eaſe; but, in ſome caſes, it ſeemed rather to bind the belly; it generally encreaſed the quantity of urine, but not to ſo great a degree as ſquills, or the like; it very commonly mended the appetite, and diminiſhed the thirſt, heat, and fever. From theſe obſervations, he concludes, that it acts in ſome degree as an evacuant; but ſince much more powerful evacuants have by no means equal effects, he is inclined to think, that its principal operation depends on its power as a deobſtruent.

On the ſubject of ſquills, he obſerves, that from the common method of uſing them, he ſeldom met with ſucceſs; but an accidental diſcovery

very ſuggeſted a method of exhibiting them, from which he derived very conſiderable advantage. This he ſtiles the emetic method; and with this view the ſquills were generally exhibited in the following form. ℞. Pulv. rad. ſcill. exſic. gr. iii. ſal. nitr. pulv. nuc. moſch. aa gr. x. ſyr. ſimp. q. ſ. M. f. bol. Cap. mane et repetat. quotidie. The viſible effects of this mode of exhibition are, that the ſquills at firſt purge and encreaſe the urine, from which the hydropic ſwellings are ſometimes a little reduced. But in a few days, nauſea and vomiting comes on, which is often ſevere, and attended with acute pain in the ſtomach, and remarkable ſlowneſs of the pulſe. During the vomiting, much fluid is thrown up, and the abdomen falls in proportion. In this way the hydropic ſymptoms diſappear; and, in a ſhort time, for the moſt part within the ſpace of 16 days, the diſeaſe is completely cured. Of ten hydropic caſes treated in this manner, ſeven were cured, which muſt be allowed to be a large proportion. In ſome inſtances, the evacuation was ſo ſudden as to require bandages to the belly.

Beſides theſe obſervations on the internal remedies in dropſy, he relates two caſes of anaſarca,

ca, in which issues were used with success; and he observes, that he never saw them attended with any disadvantage. He considers them as being much preferable to incisions, which soon heal up, and must be renewed.

In cases of amenorrhœa, compression of the crural artery succeeded only in one case of six in which it was tried. The pulvis sabinæ taken to the quantity of a scruple thrice a-day, succeeded in three cases of five. But the root of rubia tinctorum, or madder, appears to Dr Home to be a still more powerful emmenagogue. Of 19 cases here related, 14 were cured by it. It was given to the quantity of half a dram, or even of a dram, twice or oftener in the day. It has scarcely, he observes, any evident effects. It never quickens the pulse, or lies heavy on the stomach; and, in general, restores the discharge before the 12th day.

In eruptions of the herpetic kind, Dr Home found, that the tincture of cantharides considerably alleviated the disease, but seldom produced a complete cure. He found little benefit from the cortex interior ulmæ, as recommended by Dr Lysons; nor did he derive greater advantages from the vitriolic acid.

After

After ſome obſervations on the diagnoſtic ſymptoms of worms in the alimentary canal, among which he conſiders an œdematous ſwelling of the alæ narium, upper lip, and often of the contiguous parts of the cheeks, as the only certain mark, he relates ſeveral experiments, from which it appears, that the Spigelia Marylandica, or Indian pink, is an effectual and valuable vermifuge. It was given, in general, to the extent of ten grains twice in the day; and its only obvious operation was that of gently moving the belly and diſcharging the worms.

From ſeveral trials, Dr Home concludes the deobſtruent powers of mezereon to be very ſtrong. He found it reduce ſcirrhous ſwellings which appeared incurable, and in which a courſe of mercury had failed.

From ſeveral trials, he found, that a decoction of verbaſcum, the white or cow's lungwort, was uſeful in diminiſhing or ſtopping diarrhœas of an old ſtanding, and had often very conſiderable effect in eaſing the pains of the inteſtines. From dry cupping, he experienced remarkable effects in reſtraining hæmorrhages, particularly from the uterus, and he conſiders it as a much more powerful remedy than is in general imagined.

In

In the laſt ſection, Dr Home relates ſeveral experiments on different lithontriptics. From experiments made with cauſtic lie, he was inclined to form an unfavourable opinion of it, as the ſymptoms of ſome patients appeared to be aggravated by it; yet he found, that the urine of patients taking it, enjoyed ſome power of diſſolving calculi. He found, that from the uſe of mephitic water, the urine was in ſome degree impregnated with mephitic air, but that it acquired no power of diſſolving calculus.

We have thus endeavoured to preſent our readers with ſome of the moſt important concluſions contained in this valuable practical Work; but for the evidence on which they are reſted, we muſt refer them to a candid conſideration of the experiments in the original.

XIV.

Reglements concernant la Propreté des Vaiſſeaux, & la Conſervation des Equipages. Vid. Journal de Medecine, Juillet, 1780. 12*mo.* Paris.

THE Regulations now before us, which are dated at Verſailles the 15th of January 1780, and ſigned by M. de Sartine, have probably

bly been, in a good meaſure, the conſequence of the very great ſickneſs which is ſaid to have prevailed in the French fleet, during the Summer 1779. On what authority they have been inſerted by the compilers of the Journal de Medecine, we do not know; nor do they mention from whence they have derived them. They only introduce them by obſerving, that, from the importance of the ſubject, they are perſuaded the greateſt part of their readers will receive peculiar ſatisfaction from their having inſerted them. They conſider theſe regulations as a proof of the attentive care of the Miniſter, for preſerving that claſs of men, whom the philoſophy of our days preſents as an object of political calculation. How far regulations better fitted than theſe, for preſerving the health of ſeamen, may be inſtituted, we cannot take upon us to ſay. Still, however, it is not to be doubted, that in ſome particulars they may ſuggeſt uſeful practices. With this view, then, we ſhall preſent them to our readers; and, as they do not extend through many pages, in place of an analyſis, we ſhall give a tranſlation of them at full length from the Journal de Medecine.

1. All the partitions betwixt decks, and in the holds of the ſhips and other veſſels of the navy,

ſhall be waſhed over two or three times with lime-water, for the deſtruction of inſects and putrid miaſmata which may have been lodged there on former occaſions. The inſide of the veſſel muſt, after this, be well aired and dried. The balaſt of ſtones ſhall not be taken on board till it has firſt been waſhed with freſh water.

2. The ſhip's company ſhall conſiſt, as much as poſſible, of ſtout and ſound men; and none are to be taken who have been much ſubjected to ſcurvy, ſyphilis, hernia, pulmonary affections, or any other diſeaſe where there is not hopes of a ſpeedy recovery, or where there is reaſon to be apprehenſive of a relapſe after being on board. On this account, every one of the ſailors and ſoldiers ſhall be examined by the phyſicians and ſurgeons majors, who ſhall be attentive, at the ſame time, that no feigned diſeaſe ſhall furniſh a pretext for eſcaping ſervice. Thoſe mariners and ſoldiers who are taken from an hoſpital, ſhall paſs eight, or at leaſt four days, in ſome well aired place, before they be embarked; and all their cloaths muſt be well waſhed and perfumed.

3. The mariners and ſoldiers ſhall not be embarked, without being firſt provided with proper cloathing for defending them againſt cold and moiſture;

moiſture; and every man of the ſhip's company ſhall be furniſhed with an hammoc.

4. The crew of every ſhip or other veſſel ſhall be divided into different ſquads, according to the captain's orders. Different officers ſhall have each the particular charge of one of theſe ſquads. He ſhall watch over the preſervation of the health of thoſe who compoſe it, and ſhall give a daily report to the captain of whatever concerns the police of his ſquad.

5. Every man of the ſhip's company ſhall be ſhaved at leaſt once a week, and even oftener if it be thought neceſſary; they ſhall comb themſelves frequently for deſtroying vermin; and ſhall change their ſhirts every Sunday and Thurſday.

6. The ſea-officers, ſailors, ſoldiers, boys, *&c.* who have dirty legs or feet, ſhall be obliged to waſh with warm water in winter, and in ſummer to uſe twice a-week the baths eſtabliſhed on the ſtarboard and larboard bows.

7. The officer charged with each ſquad ſhall be obliged to inſpect the cleanneſs of the men and their cloaths.

8. In fine weather, the cloaths ſhall be put in the nets placed outwardly along the ſide of the

ſhip; and, in wet weather, they ſhall be put in the nets placed between decks, at every interſtice between the guns againſt the ſide.

9. The dirty linen and other cloaths ſhall be put into buckets to ſteep, or into the drag, and ſhall not be put into bags till after being waſhed and well dried. The hammocs ſhall be put into the drag every month; and when the ſhip comes to port, they ſhall be waſhed on ſhore.

10. The ſurgeon-major on board ſhall frequently examine the mouths of the crew, that their gums may not be affected with any diſeaſe which it is poſſible to prevent.

11. The medicine-cheſts ſhall be furniſhed with whatever may be reckoned neceſſary for every poſſible caſe, that the ſurgeons may be enabled to treat the ſick with ſucceſs. Theſe cheſts ſhall particularly contain the moſt celebrated antiſcorbutics.

12. The officers commanding ſhips and other veſſels, ſhall appoint thoſe of the crew who are leaſt fit for the ſea-ſervice, to take care of the ſick; and there ſhall be allowed ſuitable rewards to theſe attendants.

13. Theſe attendants ſhall make the beds of the ſick both morning and evening, and ſhall take

take the greateſt care to leave none of the urine or fæces of the ſick in the pails or buckets, either by night or day; but muſt throw it immediately into the ſea.

14. The ſurgeons majors ſhall be careful and vigilant reſpecting the ſick; they ſhall ſee that every thing neceſſary be performed by their aſſiſtants and mates; and they ſhall take care that no ſick perſon remains long in bed, when exerciſe and free air can contribute to diſſipate that kind of indolence which conſtitutes the firſt taint of a ſcorbutic affection.

15. The ſurgeon-major of every ſhip ſhall ſend with the ſick who are tranſported to the hoſpitals in the rear of the fleet, or to thoſe eſtabliſhed on ſhore, an exact account of the ſtate of each patient, and of the remedies which have been adminiſtered to them.

16. There ſhall be embarked a proper quantity of rice, malt, and conſerve of ſorrel, for the different ſoups and panadoes, which in general agree better with the ſick at ſea than animal food. There ſhall be embarked, for the time of convaleſcence only, a certain quantity of fowls; and likewiſe of carrots, of onions, and of ground

muſtard, the uſe of which is particularly recommended to the mariners.

17. There ſhall be embarked alſo, as a part of the ſtores for the ſick, independently of what enters the medicine-cheſt, vinegar, ſpirits, ſugar, rob of lemons, as well for the compoſition of the drink of Colbert, as of the antiſcorbutic punch. The ſurgeon-major, after having informed the officer charged with the diſtribution of them, ſhall be authoriſed to demand theſe articles from the commiſſary, and ſhall have the regulation of the quantity which he reckons it neceſſary to employ, as well as every thing elſe which has any immediate connection with preſerving or reſtoring the health of the crew.

18. There ſhall be given to the ſurgeon-major on board, an account of the ſtock of theſe articles, that he may regulate the conſumption which may be made in proportion to the quantity, and to the length of the voyage; and he ſhall keep an account of the conſumption in the ſame regiſter in which he keeps an account of the diſeaſes which prevail on board, and of the remedies which are employed.

19. The ſurgeons mates ſhall aſſiſt at the diſtribution of theſe refreſhments made by the commiſſary

commiſſary of vivres, that they may be ſatisfied of its being done agreeably to the orders of the ſurgeon-major.

20. The officer charged with the diſtribution of proviſions, and the ſurgeon-major, ſhall preſerve from the allowance of the ſick, the quantity of bread and wine which may remain, that the bread may be employed in the compoſition of cataplaſms, and the wine for fomentations and other medicinal uſes, without its being neceſſary to make a particular demand for theſe purpoſes.

21. The good quality of food and drink being one of the moſt efficacious means for preſerving the health of the crew, the commanders and officers charged with the diſtribution of proviſions on board his Majeſty's veſſels, muſt watch with the greateſt care, that the vivres, the wine and the water, be preſerved in ſuch a manner as not to ſuffer the leaſt poſſible prejudice during the longeſt voyages.

22. To render the ſalted proviſions ſufficiently digeſtible, on being taken out of the buckets, in which they ought to be kept for the ſpace of a night, in order to freſhen them, they muſt be put into a boiler filled with ſea-water, where

they may be ſtill farther freſhened by being boiled for about three hours.

23. The wine which is left after the diſtribution to the crew, muſt never be allowed to remain in the buckets, becauſe by that means it will become ſour during the night, and will ſpoil that poured upon it for diſtribution the day following.

24. After the water-caſks have been carefully cleaned and filled, a piece of quick-lime muſt be put into each. Half a pound muſt be added for half caſks, and a pound for whole caſks; this proceſs being found to preſerve the water from a great part of the putridity which it contracts when it is not employed.

25. To correct that putridity which the water will contract more or leſs quickly, notwithſtanding theſe precautions to prevent it, two pints of good vinegar muſt be added to every hogſhead of water, when it is put into buckets for the uſe of the crew. A ſufficient quantity of vinegar muſt be taken on board to anſwer this purpoſe.

26. Water muſt never be diſtributed for drink till after it has been three times filtrated through cloths.

27. No

27. No more bullocks, ſheep or poultry, ſhall be taken on board, than are abſolutely neceſſary as proviſion for the officers and refreſhment for the crew, to diminiſh as much as poſſible confuſion and naſtineſs on board. His Majeſty makes the commanders of veſſels perſonally anſwerable for the execution of this article.

28. The moſt ſcrupulous attention muſt be paid not to keep in the hold, or any other part of the veſſel, any dung of animals, or other matter quickly ſuſceptible of putrefaction.

29. No ſea-water muſt be left in the common buckets from one day to another, as by its ſpeedy corruption it occaſions, particularly in ſummer, a very diſagreeable and infectious ſmell.

30. All his Majeſty's ſhips muſt be provided with ventilators, which muſt be uſed as frequently as poſſible.

31. Small port-holes muſt be provided for renewing the air betwixt decks in bad weather. If ſmall ſcuttles can be opened in the ſide at every cannon-port, this muſt be put in practice; if this cannot be done without hazarding the hull of the veſſel, theſe muſt be ſupplied by ſmall ports made in the large ones.

There

There ſhall be erected between each ſpace for working the guns, vents of plate-iron placed againſt the ſides of the veſſel, which going from the firſt battery, ſhall riſe to the height of the *chandeliers de baſtingage.*

32. When it becomes neceſſary that a quantity of water ſhould be thrown into the bottom of the hold to waſh it, the maſter's mate of the hold ſhall give intimation of this to the lieutenant on duty. The water thrown into the hold ſhall not be pumped out till after it has remained there for eight hours.

33. The uſe of the air-ſails being one of the moſt proper means for driving the infected air from the bottom of the veſſel, muſt be frequently employed. But then care muſt be taken that the whole crew be ordered upon deck till the foul air of the hold be evacuated from betwixt decks through the ports; and the births of the ſick muſt be carefully guarded againſt this air by curtains. At the ſame time, all the gun-ports to leeward muſt be opened.

34. The ſame precautions muſt be taken in working the pumps; and in new veſſels, which make ſo little water, that it is apt to become putrid, ſome tons of water muſt be thrown frequently

quently into the pump-well, to waſh it, and afford an opportunity for working the pumps.

35. Every day, early in the morning, the quarter-deck, poop, paſſages, *&c.* ſhall be waſhed with ſea-water, mopped and ſanded.

36. The hammocs being made up, the different births ſhall be cleaned by thoſe who occupy them; the decks ſhall be ſcrubbed, ſweeped, and ſanded.

37. The carriages, cannon and other utenſils of the artillery, ſhall alſo be cleaned. The principal gunner ſhall appoint one of his mates to attend daily to the careful execution of this duty.

38. When all the decks are properly cleaned, the maſter's mate, and gunner's mate, ſhall report this to the maſter and chief gunner, that they may ſee that no place be neglected; and they again ſhall report to the lieutenant on duty, that he may go himſelf along with them to make an inſpection.

39. Every morning alſo, the hold, the places betwixt decks, and the falſe decks, ſhall be perfumed. The births of the ſick ſhall be perfumed twice a-day, and even oftner, particularly when any of the ſick people get purgatives. The fourth officer on duty at the time of perfuming, ſhall

ſhall either ſee himſelf, or give orders to ſome inferior officer to ſee, that this operation be performed with the attention which is requiſite, and he ſhall report it to the captain.

40. After meals, the different parts of the deck ſhall be ſwept by thoſe who occupy them; and there ſhall be allowed to every birth, a ſmall mop and bruſh, for keeping each birth clean, and every day one of the men by turns ſhall take charge of this.

41. The officer of the guard ſhall order his ſecond to walk a round through the ſhip, at ten in the morning, at four in the afternoon, and at ten at night: The maſter, the gunner, and the commander of marines, ſhall alſo make three rounds at different hours, and ſhall make a report to the lieutenant on duty.

42. His Majeſty recommends it to all the commanders of his ſhips and veſſels, to beſtow the greateſt vigilance on the execution of the preſent regulations; to encourage exerciſe, activity and cheerfulneſs among the crews entruſted to their care; and in fine, to employ every meaſure which can contribute to the health and preſervation of their crews.

Given at Verſailles, the 15th of January 1780,

(Signed,) DE SARTINE.

XV.

XV.

Diſſertatio Inauguralis Anatomico-obſtetricia de Sectione Synchondroſeos Oſſium Pubis. Auctore Emanuel Bentely. *4to.* Argentorati.

THE diviſion of the ſymphyſis pubis, in caſes of difficult labour from diſtortions of the pelvis, has of late become not only a ſubject of ſpeculation, but of practice. Our Author, in the work before us, enters minutely into the merits of the queſtion, as to the propriety of ſubſtituting this operation for the Cæſarean ſection.

In the courſe of a very accurate anatomical deſcription of the bones which compoſe the pelvis, Dr Bentely renders it evident, that at the junction of the oſſa pubis, theſe two bones are each of them covered with a diſtinct cartilage, without any intervening elaſtic ſubſtance whatever. Almoſt every anatomiſt has hitherto aſſerted, that the ſame kind of yielding ligamentous ſubſtance, is detected at the junction of theſe bones, as is found between the vertebræ of the ſpine; our Author however proves this to be merely a hypotheſis, the cartilages of the oſſa

offa pubis being always found in contact with one another without the intervention of any other fubftance.

The different circumftances which ought to render the Cæfarean operation neceffary, may be reduced, our Author remarks, to the following:

1. When a woman, come to her full period, is found to have fuch a narrow pelvis, that the hand of the operator cannot be introduced to the uterus; or, if introduced, that the fœtus cannot be extracted.

2. When the fœtus has been extra-uterine from the commencement of pregnancy, or has been pufhed from the cavity of the uterus, in confequence of a rupture in that vifcus.

3. When large fcirrhous tumours occupy the mouth of the uterus, fo as to prevent either the paffage of the fœtus, or the introduction of the operator's hand. Inftances of which are to be met with in Hildanus.

4. When, in cafes of uterine herniæ, the uterus cannot be replaced in confequence of adhefions between it and the neighbouring parts.

Of all thefe caufes, however, that may give rife to the Cæfarean operation, the moft frequent,

quent, our Author remarks, is that which depends upon a wrong conformation of the bones of the pelvis; and it is in this caſe only, he thinks, that any doubt can ever occur as to the propriety of having recourſe to the diviſion of the ſymphyſis pubis, in preference to the Cæſarean operation. In all the other cauſes of difficult labour, the Cæſarean ſection muſt ſtill be the only reſource; and even in this caſe of the malady, it is our Author's opinion, that the diviſion propoſed, of the ſymphyſis pubis, will ſeldom, if ever, prove an adequate remedy.

Dr Bentely does not merely aſſert this as a matter of opinion; his reaſons for it are propoſed with a great deal of candour, and ſupported by a number of experiments.

In caſes of difficult labour from a mal-conformation of the bones of the pelvis, the obſtruction which occurs to the paſſage of the head of the fœtus, depends almoſt always, our Author remarks, upon a narrowneſs or ſtraitneſs in the ſhort diameter of the pelvis, and ſeldom upon any deficiency in its longer diameter. This being the fact, he obſerves, that very little advantage is to be expected in ſuch caſes from a diviſion of the bones of the pubis; for, although

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by a diſtraction of theſe bones, the long diameter of the pelvis may be ſomewhat extended, yet its ſhort diameter, or, in other words, the diſtance of the oſſa pubis from the os ſacrum, cannot be much increaſed by the former of theſe being ſomewhat ſeparated.

Various experiments are related, which were inſtituted with the ſole intention of determining the degree of advantage to be obtained by this operation. The ſubjects conſiſted of women, who had died, either in different periods of pregnancy, or ſoon after delivery. But in all of them, the increaſe given to the ſhort diameter of the pelvis was exceedingly trifling; in no caſe being in any degree equal to the want which ought to render ſuch an operation neceſſary. Even when a very conſiderable degree of force was applied, and when of courſe the divided oſſa pubis were a good deal ſeparated from one another, yet ſtill the diameter of the pelvis was increaſed to a very ſmall degree only, where in ſuch caſes of difficult labour its enlargement in general is moſt needed.

After an accurate account of various experiments of this nature upon the dead body, Dr Bentely favours us with the hiſtory of two caſes of

of difficult labour, in which the divifion of the fymphyfis pubis was had recourfe to upon the living body; and the events of both thefe tend greatly to corroborate the Doctor's opinion with refpect to the inutility of this operation in every cafe of difficult labour.

The firft of thefe was performed by Profeffor Sibold, a celebrated anatomift, in the month of February 1778, fome time after Dr Sigault of Paris had communicated to the public the fuccefs of his operation in a fimilar inftance.

After dividing the bones at their fymphyfis with the greateft attention, the Profeffor was furprifed to find, that a very great degree of ftrength was neceffary to produce any feparation between them; and even all the force that could be applied with any degree of fafety, could not effect an opening of much more than a finger's breadth.

The advantage, therefore, that was gained here, proved exceedingly fmall; a dead child, however, was at laft extracted; but much more force was found neceffary, than durft have been ventured upon had the child been living.

A violent inflammatory fever fucceeded this operation. But by different blood-lettings, and

other remedies, it was removed. The patient did not complain of ſo much pain in the back and loins as might have been expected from the force uſed in the operation for diſtending the bones. For ſeveral weeks the urine paſſed by the wound: On the ſeventh week, however, ſhe was able to walk abroad; but at the end of the firſt year, the wound ſtill remained open, owing to the tedious exfoliation which had occurred of different portions of the oſſa pubis.

The other operation was done in the month of May 1778, by Dr Guerard, profeſſor of anatomy at Duſſeldorf. This woman was 37 years of age; this was her firſt pregnancy, and her pelvis was much diſtorted. Every effort for delivering her having proved ineffectual, owing entirely to the narrowneſs of the pelvis, it was at laſt agreed to have recourſe either to the Cæſarean operation, or to the diviſion of the ſymphyſis pubis.

This laſt operation being determined on, it was immediately put in practice with every care and attention neceſſary for enſuring ſucceſs. But although in this caſe the bones of the pubis were made to ſeparate fully an inch and a half from one another, yet the advantage thereby obtain-

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ed, in increaſing the diameter of the pelvis, was ſo very ſmall, that it was with the utmoſt difficulty the delivery could be completed, even by tearing the child away piece-meal by the crotchet. At laſt, however, the fœtus was all got away; but the woman was ſo very much reduced and ſpent by the operation, that ſhe died on the 10th day.

From the reſult of theſe two caſes, therefore, as well as from the experiments already mentioned, our Author is of opinion, that this operation will not be found to ſucceed; and that whether the difficulty of labour may proceed from a malconformation in the higher or lower opening of the pelvis.

The ſucceſs which attended Dr Sigault's operation proves nothing, our Author thinks, againſt this doctrine; for in that woman, it is now proved, he obſerves, by Mr Piet's publication on this ſubject, that although the diameter of the pelvis was narrower than it ought to have been, yet that it was at leaſt three inches at its narroweſt point. This our Author ſeems to conſider as an opening fully ſufficient for preventing in every caſe the neceſſity of having recourſe to this operation.

Mr Piet, we are informed, was very well able to judge of the fact, from his having delivered this woman on a former occasion; the child indeed was dead, but of a pretty large size; and finding the pelvis narrower than it ought to be, he was very accurate in attending to its diameter, which he asserts to have been at least three inches. Dr Bentely, therefore, does not suppose that this case can in any degree invalidate his opinion.

XVI.

Henrich Matthias-Marcard der Arzneywissenschaft Doctors, zu Hannover, Medicinische Versuche. Zweyter Theil. 8*vo*. Leipsig.

i. e.

Medical Essays by Henry Matthias-Marcard, M. D. *of Hanover*. Part II.

OF the first volume of this Work, which contains Dr Marcard's theory of jaundice, we have already given an account in a former part of this work. In the volume now before us, which contains practical treatises and observations on different

different ſubjects, Dr Marcard begins with giving an account of a very ſingular diſeaſe which appeared at Stade in the winter 1771 and 1772, which he names a *ſpaſmodic diſorder*, reſembling the kribelkrankheit of the Germans, literally the *cripple diſeaſe*, the convulſio raphania of Sauvages, the raphania of Linnæus, Vogel and Cullen. According to the account our Author gives of it, this is an endemic ſpaſmodical diſeaſe peculiar to Germany. The eſſentials of this diſeaſe are, frequent painful ſpaſms, "the motus "ſpaſmodici vagi of the ancient writers," attacking commonly at firſt the muſcular parts, and particularly the limbs. It does not diſappear by any diſtinct criſis, but for the moſt part by a kind of metaſtaſis. When it happens that the termination of the diſeaſe is unfavourable, it attacks the noble parts, and, by its effects upon them, deſtroys the life or the health. It is diſtinguiſhed both by Sauvages and Vogel from the ergot of the French, though neither of them have pointed out the grounds of this diſtinction. But, according to the accounts our Author has received of it, the ergot is a pain in one limb, followed with a ſtupor, a change in the colour of the ſkin, and complete mortification. This

he obſerves is a termination which never takes place in the raphania. Although this diſeaſe, which our Author here deſcribes as having appeared at Stade, bears the ſtrongeſt reſemblance to the raphania, yet it differed very conſiderably from the accounts given of that which appeared ſome years before at Zell, Holſtein, and Heſſe Darmſtadt. That idiotiſm, that raging hunger, were not to be found to the degree mentioned by other writers on this diſeaſe, and the epileptic ſymptoms appeared only in a very few inſtances. Still, however, notwithſtanding this difference, he is diſpoſed to think, that this diſeaſe was plainly of the nature of the kribelkrankheit. At the ſame time, the diſeaſe he deſcribes, he obſerves, was infectious, which almoſt all the writers on the ſubject ſay is not the caſe with the raphania; and he does not imagine that it took its riſe from the uſe of the ſecale cornutum, the cauſe which they uſually aſſign for that affection.

The ſecond treatiſe in this volume is on the vapour-bath; and our Author, together with a copper-plate, gives an account of the apparatus for the vapour-bath which he has employed. He

He relates alſo many different caſes, in which he has employed it with advantage.

In the third diſſertation, he treats of old wounds and ſores, particularly on the legs. Dr Marcard obſerves, that ſores on the legs, particularly of old people, have long been conſidered as a kind of drain, by which nature diſcharged a certain preternatural morbid fluid, which, had it continued mixed with the circulating juices, would have corrupted the whole maſs, and thereby occaſioned ſome ordinary diſeaſe, and, if they fell upon the nobler parts, would entirely deſtroy the body. Many Phyſicians, however, have of late maintained, that the corruption which manifeſtly appears in the fluid diſcharged from old ſores, ariſes not from the conſtitution of the body, but from the ſore itſelf. In conſequence of this principle, they naturally drew the concluſion, that the healing of the ſore entirely removed the complaint. Amongſt the writers who maintain this opinion, Goulard is the moſt confident, who adviſes, without diſtinction, the application of his preparation of lead; though it is true, that, at the ſame time, he recommends that recourſe ſhould be had to ſuitable internal means.

Our Author, after extracting a paſſage from Goulard, adduces a variety of different caſes to prove, that the application of preparations of lead, in the healing of old ſores, is often attended with the moſt unhappy and fatal conſequences. Amongſt many other obſervations which he throws out, he ſays, that there is one method which he has met with of healing old ſores, which, in certain circumſtances, he has found attended with good effect, that is, the applying a bliſter to it. If the diſeaſe ariſes from the conſtitution, no bad effects can, he thinks, follow from it; and, if the ſeat of the complaint be in the ſore itſelf, it may effect a cure by deſtroying the too great ſenſibility of the diſeaſed part, and changing the ſtate of circulation. He ſays, however, that in all the caſes which he has had occaſion to treat, he made no attempt directly to heal an old ſore in the leg, but endeavoured, by purges and other internal means, to meliorate the juices. He adviſes externally the uſe of lime-water, where the ſore has a very bad appearance. He acknowledges, that in ſome of the worſt caſes, a preparation of lead was found of ſervice. With this view, he in general employed a ſolution of ſugar of lead, or a ſalve prepared

prepared with white-lead. But in no caſe did he think it adviſeable entirely to heal up the ſore. He reckoned it ſufficient to bring it to a better appearance. And this he thinks may be done without any hazard.

XVII.

Firſt Lines of the Practice of Phyſic, for the Uſe of Students in the Univerſity of Edinburgh. By William Cullen, M. D. and P. Vol. II. 8*vo.* Edinburgh.

IN two former parts of theſe Commentaries, we gave a very full account of the firſt volume of this Work. To this we were induced by a deſire of laying before our readers the fundamental parts of a celebrated ſyſtem of phyſic, which has of late had many followers, and not a few opponents, among thoſe who have had an opportunity of hearing it delivered in lectures. Into the force of the arguments employed in ſupport of this doctrine, or which may be adduced againſt it, we reckon it foreign to our buſineſs in this place to enquire. But we are perſuaded, that when the ſingle circumſtance of the novelty

novelty of Dr Cullen's doctrine is considered, none of our readers will be displeased at the attention we have bestowed upon them.

We now proceed to follow our ingenious Author through his second volume, which was not published till a considerable time after the first had appeared.

This volume commences with the third book of the work, which comprehends the *exanthemata*, or *eruptive fevers*, being the third order of pyrexiæ in our Author's Nosology.

Erysipelas is the first disease which Dr Cullen mentions. He supposes it to depend upon a matter generated within the body, and which is, in consequence of fever, thrown out upon the surface. Although it may be difficult to apply this doctrine to every case of erysipelas, yet the Doctor thinks, that it always corresponds with the erysipelas which occurs on the face, of which, on this account, he proceeds to treat. After a full enumeration of the symptoms, the Author concludes, that erysipelas of the face is to be cured very much in the same manner as phlegmonic inflammations, by blood-letting, by cooling purgatives, and the antiphlogistic regimen; the propriety of this practice has been confirmed

confirmed by his own experience. It is probable that eryſipelas is ſometimes attended with, or is a ſymptom of putrid fever; and, in ſuch caſes, the evacuations propoſed above may be improper, and the uſe of the Peruvian bark may be neceſſary: But our Author cannot be explicit on this ſubject, as ſuch putrid caſes have not fallen under his obſervation.

The next diſeaſe which is the ſubject of conſideration is the *plague*; and in treating of it, the means of prevention, and the means of cure, are the great objects of the Doctor's enquiry.

Various and uſeful hints are thrown out, for preventing the communication and ſpreading of the contagion which gives riſe to the diſeaſe. The chief of theſe are, to ſhorten the time of quarantine, both of perſons and goods, and thereby leſſen the temptation to break ſuch quarantine: To avoid near communication with infected perſons or goods. Perſons remaining in infected places, and obliged to have a near communication with the ſick, ought to avoid every debilitating cauſe; ſuch as a ſcanty diet, intemperance in drinking, exceſs in venery, fatigue, any conſiderable evacuation, expoſure to too great

great cold, and the impreſſions of fear. They ought farther to guard againſt infection, by the moderate uſe of wine or of ſpirituous liquors; by moderate exerciſe; by the uſe of the cold bath, if accuſtomed to it; by taking bark and camphire.

In the cure of the plague, the Doctor chiefly refers to what he had delivered on the cure of fever in general.

On the ſubject of the ſmall pox, the Doctor, after enumerating the ſymptoms as they occur in the diſtinct and in the confluent kind, endeavours to aſcertain the cauſes of this difference in the appearance of the diſeaſe. He rejects the idea of its depending upon any peculiarity of the virus which communicates the infection; and concludes, that an inflammatory ſtate of the whole ſyſtem, and more particularly of the ſkin, gives occaſion to a greater number of puſtules, and that the cauſes of this may produce moſt of the other circumſtances of the confluent ſmall pox.

In treating of the cure of the ſmall pox, Dr Cullen enters into a full conſideration of the practice of inoculation, and enumerates the ſeveral meaſures which precede and follow this operation,

operation, and which are ſuppoſed to contribute to its ſalutary effects.

1. *Chuſing a proper patient*, and avoiding the concurrence of other diſeaſes. On this ſubject, the Doctor has obſerved, that the preſence of ſcrophula, and even of ſeveral diſeaſes of the ſkin, did not render the ſmall pox more violent; and he is of opinion, that it is the febrile diſeaſes, or aliments ready to induce or aggravate a febrile ſtate, that give the concurrence which is moſt dangerous with the ſmall pox. In every caſe where it is difficult to guard againſt infection, the Doctor is of opinion, that it is ſafer to give the ſmall pox by inoculation, than to leave the perſon to take them by the common infection.

2. *Chuſing a proper time of life for inoculation*; this Dr Cullen, from various conſiderations, fixes to be betwixt the time when the firſt dentition is over and the time of puberty.

3. *A favourable ſeaſon*; which the Doctor points out to be that in which we avoid the extremes of heat and cold.

4. *The preparation of the patient, by enjoining abſtinence from animal food.* The Author is of opinion,

opinion, that a longer abſtinence is neceſſary than is generally preſcribed.

5. *The preparation of the patient, by mercurial and antimonial courſes:* Dr Cullen doubts the utility of theſe courſes; at leaſt he ſuppoſes them to operate only as purgatives.

6. *Avoiding at the time of inoculation, cold, fear, intemperance, or other cauſes that might aggravate the future diſeaſe.* Dr Cullen thinks that inoculation derives a great, and perhaps its principal advantage, by avoiding the concurrences above mentioned.

7. *The opportunity which inoculation gives of a proper choice of matter.* Our Author, however, thinks it very doubtful if any choice is neceſſary, or can give any benefit in determining the ſtate of the diſeaſe.

8. *The introducing by inoculation but a ſmall portion of the contagious matter.* But in the caſe of the ſmall pox, a conſiderable difference in the quantity of the contagion introduced, has not ſhewn any effects in modifying the diſeaſe.

9. *After the inoculation the employing frequent purging.* Purging appears to diminiſh the activity of the ſanguiferous ſyſtem, and the determination to the ſkin; and is, therefore, a practice

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in inoculation which may give confiderable advantage.

10. *Both before and after inoculation, the avoiding external heat, and expofing the perfon to a free and cool air.*

A large and repeated experience has confirmed the fafety and efficacy of this remedy; and as it may and can be more certainly employed with the practice of inoculation, than it can be in cafes of common infection, it muft give a fingular advantage to the former.

11. *Moderating the eruptive fever, by means of purgatives, by cooling and antifeptic acids, by frequent expofure to cool, and even to cold air; and by cold drink given freely.*

12. *After the eruption, the continuing the application of cold air, and the ufe of purgatives during the courfe of the difeafe till the puftules are fully ripened.*

Dr Cullen is of opinion, that the application of cold air after the eruption, cannot give any peculiar advantages to inoculation. He alfo thinks, that the employment of purgatives has often led to an abufe. For when the ftate of the eruption is determined, the number of puftules fmall, and the fever has entirely ceafed, he fuppofes

poses the safety of the disease to be ascertained, farther remedies to be superfluous; and therefore, that, in such cases, the use of purgatives is unnecessary, and may often be hurtful.

Our Author next takes notice of the *chicken-pox*, which he seems to introduce, to explain the error into which some practitioners have fallen, when they suppose that the same patient has been twice attacked with the *small pox*.

When treating of the *measles*, Dr Cullen observes, that from the symptoms plainly indicating an inflammatory state of the whole system, we are to trust the cure to the evacuations made by blood-letting, and gentle purging, and to the use of blisters. He highly recommends the exhibition of opium in large doses when the fever is moderate, and when cough and watchfulness form the chief complaints of the patient.

He rejects the analogy betwixt this disease and the small pox that has been drawn by some Physicians. He imagines, that the catarrhal symptoms which always precede this disease, and the peripneumonic affections which are often the consequence of it, justify him in prohibiting the free exposure to cold air as commonly practised in the small pox. In proof of this assertion, our Author

Author obſerves, that in ſeveral caſes, where, in conſequence of expoſure to cold, the eruption of the meaſles diſappeared, it was again brought out with much relief to the patient by the application of a due degree of heat.

Dr Cullen ſeems to oppoſe the popular opinion of the neceſſity of purging, in order to carry off the *dregs* of the meaſles. It is not, he thinks, drawing off the morbific matter which we need to ſtudy, ſo much as the obviating the inflammatory ſtate of the ſyſtem which had been induced by the diſeaſe. With this laſt view, purging may ſtill be a proper remedy; but bleeding, in proportion to the ſymptoms indicating an inflammatory diſpoſition, is ſtill more ſo.

Dr Cullen next proceeds to treat of the ſcarlet fever. From a variety of conſiderations, he is of opinion, that this diſeaſe is ſpecifically different from the cynanche maligna; and he has found from all his experience, that they require a different treatment. This difference chiefly conſiſts in the employment of bleeding, although ſparingly; and in having recourſe to the antiphlogiſtic regimen. In the ſcarlet fever, when the febrile ſymptoms run high, when the fauces are ſwelled and pained, and when at the ſame time

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there is no ambiguity in the nature of the affection of the throat, these are the most effectual remedies.

When treating of the miliary fever, Dr Cullen remarks, that it is acknowledged on all hands, that the red miliary eruption is a symptomatic disease. He also concludes from a variety of arguments, contrary to the opinion of several Physicians, that the white miliary eruption is also symptomatic, and does not depend upon a specific contagion: That it occurs in the course of other diseases in which a hot regimen is employed; and more especially so, when debilitating causes have preceded such diseases, as the loss of red blood by accident, profluvium mensium, or where a long continued fluor albus has prevailed.

In the fourth chapter, Dr Cullen proceeds to consider hæmorrhagies. He introduces the subject with some general observations on hæmorrhagy. He restores the distinction which nosologists have overlooked betwixt *active* and *passive* hæmorrhagies; and he observes, that it is the active hæmorrhagies, or those attended with pyrexia, of which he is to treat in this place.

After

After enumerating the phænomena of hæmorrhagy, Dr Cullen proceeds to aſcertain the proximate cauſe. The different circumſtances conſtituting the proximate cauſe, ſeem to him to be the following:

Some inequality, he thinks, takes place in the diſtribution of the blood occaſioning a congeſtion in particular parts of the ſanguiferous ſyſtem; and conſequently a preternatural diſtenſion of the veſſels of the part. This diſtenſion proves a ſtimulus to them, and excites their action to a greater degree than uſual; by which means the blood puſhed with unuſual force into the extremities of the veſſels, opens them by anaſtomoſis or rupture.

Farther, in conſequence of congeſtion, a ſenſe of reſiſtance ariſes and excites the action of the *vis medicatrix naturæ;* and the exertions of this are uſually made by the formation of a cold ſtage of fever, inducing a more vigorous action of the veſſels; and the concurrence of this exertion more effectually opens the extremities, and occaſions the diſcharge of the blood.

In order to account for the return of hæmorrhagy, it is obſerved, that though it may depend upon the ſtate of the veſſels of a particular part,

 yet

yet it is neceſſary to that ſtate's producing its full effect, that the whole ſyſtem be in its natural plethoric condition; and if this ſhould be in any degree beyond what is natural, it will more certainly determine the effects of topical congeſtion to take place. But hæmorrhagy has always a tendency to increaſe the plethoric ſtate of the ſyſtem, and to occaſion its own return.

As the renewal and farther accumulation of blood require a determined time, ſo, on the ſeveral repetitions of hæmorrhagy, that time will be nearly the ſame; and therefore the return of hæmorrhagy will be commonly at ſtated periods, as has been obſerved frequently to happen.

Dr Cullen explains the occurrence of hæmorrhagy from particular veſſels, and at certain periods of life, by taking a view of the gradual increaſe, and ſucceſſive evolution of the different parts of the body. He ſuppoſes that the veſſels in thoſe parts which are firſt completely formed, will firſt be capable of reſiſting the action of the heart; ſo the determination of the blood will moſt readily produce in that part a rupture of the veſſels, or a hæmorrhagy.

When the ſeveral parts of the ſyſtem of the aorta have attained their full growth, and are duly

duly balanced with one another; if then any considerable degree of plethora remain or arise, the nicety of the balance will be between the systems of the aorta and pulmonary artery; and though the lesser capacity of the vessels of the lungs is commonly compensated by the greater velocity of blood in them, yet if this velocity be not always adjusted to the necessary compensation, it is probable that a plethoric state of the whole body will always be especially felt in the lungs; and therefore, that a hæmorrhagy, as the effect of a general plethora, might be frequently occasioned in the lungs, even although there were no fault in their conformation.

There is another circumstance in the animal œconomy, of which Dr Cullen avails himself. About the prime of life, or the age of 35, an equal balance takes place between the arterial and venous systems, and between the different parts of each; but after this period, the arteries, in consequence of the gradual condensation of their coats, which had been going on from the beginning of life, and which still continues to increase, by the stronger resistance which they give to the passage of the blood through them, become an over-match for the veins; hence an accumulation of blood in the veins, or venous

 plethora,

plethora, arifes. This part of our Author's doctrine is founded on the experiments of Sir Clifton Wintrigham. It is upon this foundation that Dr Cullen explains the hæmorrhagies that occur in the later periods of life, particularly the hæmorrhoidal flux; the blooding at the nofe which happens to people advanced in life; the pouring out of blood into the cavity of the cranium, the effect of which is to produce apoplexy; and which is therefore properly named by Dr Hoffman, *hæmorrhagia cerebri.*

After enumerating the occafional caufes, Dr Cullen delivers the cure of hæmorrhagy. Here he takes occafion to combat the doctrine of the Stahlian fchool, which maintains, that hæmorrhagy is generally to be encouraged, and fometimes folicited; and is not to be fuppreffed, unlefs when it goes to great excefs, or happens in parts in which it may be dangerous.

On the contrary, our Author alleges, that hæmorrhagy, either on its firft attack, or after recurrence, is never neceffary to the health of the body, unlefs upon the fuppofition that we cannot prevent or remove the plethoric ftate which feems to require the evacuation. But as he judges this poffible in moft cafes, fo he does not

think

think that hæmorrhagy is in all cafes neceffary; in general, he thinks that hæmorrhagy is to be avoided.

1*ft*, Becaufe it does not always happen in places where it is fafe.

2*dly*, Becaufe often, while it may relieve a plethoric ftate, it may, at the fame time, induce a very dangerous difeafe.

3*dly*, Becaufe it may often go to excefs, and either endanger life, or induce a dangerous infirmity. And,

Laftly, Becaufe it has a tendency to increafe the plethoric ftate it was meant to relieve, to occafion its own recurrence, and thereby to induce a habit, which, if left to the precarious and unequal operation of nature, may, from the frequent errors of this, be attended with much danger.

The means which Dr Cullen propofes for preventing the recurrence of hæmorrhagy, is agreeable to the doctrine laid down, the obviating the plethoric ftate of the fyftem by abftinence, exercife, and temporary evacuations; always, however, avoiding blood-letting, as inducing a bad habit, and tending to increafe the plethoric ftate.

The ſecond meaſure recommended to prevent hæmorrhagy, is the avoiding occaſional cauſes.

After enumerating the ſeveral means to be employed when hæmorrhagy actually takes place, Dr Cullen proceeds to treat of particular hæmorrhagies; but our limits will not permit us to follow the ingenious Author in his obſervations on theſe; and we eſteem it the leſs neceſſary to do ſo, becauſe this part of the ſubject is connected with the general doctrines, of which we have endeavoured to give an account.

The fifth book, which concludes this volume, treats of the *profluvia*, or fluxes of our Author. Of theſe Dr Cullen only conſiders two genera, the Catarrh and Dyſentery, as being more eſpecially marked by the preſence of febrile ſymptoms. Dr Cullen attributes catarrh to the application of cold to the ſurface of the body, when it operates by ſtopping perſpiration. From the ſimilarity between the fluid exhaled from the ſkin and the lungs, he thinks, that upon any ſtoppage of the former, the fluid will be determined to paſs off by the latter, and from the increaſed quantity of conſequence poured out into the bronchiæ, the ſymptom of cough ariſes.

Dr

Dr Cullen marks another ſpecies of catarrh ariſing from contagion, frequent examples of which have been obſerved ſince the 14th century. This is the moſt general epidemic that has been known, for it ſeldom appears in one part of Europe, without ſucceſſively pervading the whole of it, and it has even been carried to America, where it has raged in a ſimilar manner.

This, however, makes no real diſtinction in the diſeaſe; the fever in catarrh, from contagion, is generally more acute, but the treatment in both caſes is the ſame, and muſt be regulated according to the violence of the ſymptoms.

Dr Cullen gives a very full enumeration of the ſymptoms of dyſentery. He thinks, the remote cauſe of this diſeaſe is a ſpecific contagion, and that the proximate cauſe of it conſiſts in a preternatural conſtriction of the colon. This points out the moſt effectual method of treatment, viz. *purging* aſſiduouſly employed. The means for this may be various, but our Author thinks, that the gentle laxatives are uſually ſufficient, and he puts great dependence on the uſe of tartar emetic in ſmall doſes.

He concludes the preſent work, by making ſome uſeful obſervations on other means of cure, which

which may be requisite for particular symptoms occurring in the course of the disease.

XVIII.

Disputatio Inauguralis Medica, sistens Tentamina quædam cum Aere Fixo in ægrotis instituta. Auctore Joanne Jassoy, *Hanoviense. 4to.* Goettingæ.

OUR Author seems to be well acquainted with the different proposals that have of late years been made in Britain, respecting the employment of fixed air in the cure of diseases.

After narrating the opinions of the several gentlemen who have laboured this subject, he gives the history of seven cases which he treated with this medicine. From the result of his practice, he draws the following conclusions: That fixed air was of no service in phthisis, calculi of the kidneys, or in scrophula, and of very little use in the cure of worms: That the external application of it in *tinea capitis* appeared to be of use. And he thinks it worth while, to enquire whether it excels other medicines employed in this complaint. In some cases, he found that fixed air promoted the flow of urine; in others, it induced

duced ſweat, and in one inſtance excited diarrhœa. He alſo found, that the urine ſo promoted precipitated quick-lime from water.

He concludes with giving it as his opinion, that the powers of fixed air as a medicine, are not ſo great as many celebrated men have thought them.

XIX.

Thoughts on Amputation, being a Supplement to the Letters on Compound Fractures, and a Comment on Dr Bilguer's Book on this Operation: To which is added a ſhort Eſſay on the Uſe of Opium in Mortifications.—By Thomas Kirkland, M. D. *Member of the Royal Medical Society of Edinburgh.* 8*vo.* London.

DR KIRKLAND's intention in this publication, is to vindicate Dr Bilguer's doctrine with regard to amputation, which he thinks has been miſunderſtood. At the ſame time, he wiſhes to rectify ſome miſtakes reſpecting the opinion of that Author, which he himſelf fell into in the introduction to his letters on fractures.

The

The doctrine contended for by Dr Bilguer is, that the cafes in which amputation is neceffary, are much lefs frequent than has been hitherto fuppofed. To determine this point, Dr Kirkland confiders, at confiderable length, the different morbid conditions which have been thought to require amputation. From much ingenious reafoning, in which he difplays a thorough knowledge of the writings of the moft eminent furgeons, both ancient and modern, he draws the following conclufions.

1ft, That in mortifications which fpread to the bone, amputation, when neceffary, fhould not take place till we can apply the faw betwixt the living and the dead parts; and that this mode of amputating fhould, in this inftance, be preferred.

2dly, In compound fractures of the long bones of the extremities, we fhould act on the fide of probability. If there is a probability of the limb being faved, we fhould attempt to fave it; but if there is no hope of a cure without amputation, it fhould take place without lofs of time, giving preference, as often as opportunity offers, to the method of removing the limb at the injured part; and in all this we fhould be directed

by

by experience, without ſuffering ourſelves to be guided by conjectural reaſoning, or to be alarmed with the frightful appearance of a deſperate caſe.

3dly, If in compound fractures of the joints, the bones be not much ſhattered, or the ligaments and veſſels ſo much torn that there can be no poſſibility of a future circulation; and if the head or heads of bones can be conveniently taken away; or if there be a large opening, ſo that no matter can lodge, or air be confined, a cure will often, or for the moſt part, happen. Whereas, if great ſuppuration on the membranes and tendons, with foul bones and a colliquative fever follow, amputation of the limb will generally be neceſſary to preſerve life.

4thly, If care has not been taken to preſerve the patient's ſtrength, and the ſtrength of the limb in compound fractures, from the beginning, we may be obliged to have recourſe to amputation, as a doubtful remedy is better than none.

5thly, Daily experience, and the concurring teſtimony of eminent men, evince, that violent contuſions in the ſoft parts, with ſhattered bones, unaccompanied

unaccompanied with a wound, may generally be cured without amputation.

6thly, It is not neceſſary to amputate on account of a wound, or a ſimple diviſion of the main trunk of an artery, carrying blood through a limb, except it be made above where the veſſel ſends off collateral branches; and when this happens in the axilla, it ſhould ſeemingly take place to prevent a mortification. The ſame may be ſaid in recent aneuriſms, ariſing from injury done to the artery. But in old aneuriſms, or in wounds of the principal trunk of the arteries, where the collateral branches are at the ſame time ſo obſtructed from the injury, that a circulation cannot be carried on, timely amputation may prevent mortification, and preſerve the life of the patient.

7thly, In a caries of the cylindrical bones, the limb may be preſerved although the greateſt part of the bone be taken away. Even where the heads of the bones in a joint are foul, but unattended with pain or fever that may endanger the life of the patient, we may wait with patience in hopes of an anchyloſis taking place.

On the contrary, when the exfoliation or removal of the long bones cannot be procured; after

after a colliquative fever, remedied by dilatations, proper dreſſings, and proper internal medicines; or where the heads of all the bones in a joint are become foul, the ligaments, *&c.* thickened and ſpoiled, and great pain, fever and their attendants, invade the patient, amputation muſt take place, or he will probably die.

8*thly*, In local ſcirrhi, extirpation will be ſucceſsful; but when glands are ſcirrhous in ſeveral parts of the body at the ſame time, or when the whole body is contaminated by the abſorption of cancerous virus from a local ſcirrhus or cancer, death only can be expected. Beſides theſe, there are other diſeaſes, ſuch as different kinds of anomalous tumours, *&c.* which may ſo perfectly deſtroy the limb on which they are ſeated, that nothing but the removal of it can do ſervice. But we again inſiſt on what we firſt principally contended for, that in private country practice, where the limb is properly treated, gangrenes, or a great diſcharge of matter in bad compound fractures, are ſeldom fatal; that amputation is very rarely neceſſary in theſe accidents. And we muſt think thoſe muſt have been very unfortunate, whoſe experience led them to be of a contrary opinion.

On

On the ſubject of opium as a medicine in mortification, Dr Kirkland recommends it only in caſes where the diſeaſe proceeds from previous inflammation and conſequent obſtruction; in ſuch inſtances, even when given in ſmall but repeated doſes, he has found it highly ſerviceable.

XX.

Pharmacopœia Roſſica. *4to.* Petropoli.

THERE is perhaps no branch of medical ſcience, in both the theory and practice, of which greater reformations have been made than in pharmacy. This aſſertion every one will readily allow, who conſiders with any attention the editions which have lately been publiſhed of the Pharmacopœia Danica, Suecica, Edinburgena, and of the Diſpenſatorium Pharmaceuticum Brunſvicenſe. Of the alterations and improvements which have been made in theſe works, by colleges of Phyſicians, eſtabliſhed and ſupported by royal authority, we have already given ſome account in former numbers of this work.

The publication now before us is the production of a college which had no former Pharmacopœia

copœia to correct. Among the many improvements which have of late been made in the Russian empire in every department of science, medicine has not been neglected. The present Empress, to whom her country is indebted for many useful seminaries of education, superintended by learned men invited from different countries in Europe, has also established a College of Physicians at Petersburgh. The present Pharmacopœia, published for the use of the Russian empire, is the first production of their conjoined labours.

The Authors of this work seem to have availed themselves of a careful perusal of all the Pharmacopœias lately published; and from the manner in which their work is executed, other nations may in their turn be benefited by the present publication. The nature of this work does not admit of a proper analysis; and those who wish to derive instruction from it, must have recourse to the original. We shall however briefly endeavour to point out a few of those particulars in which it chiefly differs from the Edinburgh Pharmacopœia.

This Work is divided into two parts. The first of these is entitled *Materia Medica;* the se-

cond, *Præparata & Composita*. In both parts, the different articles are arranged in alphabetical order. In enumerating the different articles of the Materia Medica, they have followed a plan more nearly resembling that of the Pharmacopœia Suecica than that of the Pharmacopœia Edinburgensis. This plan will be better understood from a few examples than from any explanation. And for this purpose we shall here present our readers with the ten first articles in the order of the list.

ABIETIS turiones, resina granulata.

Pinus abies LINNÆI. Yeal Rossorum. Arbor per Rossiam septentrionalem vulgatissima.

ABROTANI herba.

Artemisia Abrotanum. Bogie dereva. Frutex per Rossiam australem spontaneus, et Petropoli perennans.

ABSINTHII PONTICI vel ROMANI herba.

Artemisia Pontica. Bielaya Neforoshtsh. Suffrutex per Rossiam australem spontaneus.

ABSINTHII VULGARIS herba summitates.

Artemisia absinthium. Polin. Planta subperennis, in Rossia et Siberia spontanea.

ACACIÆ flores; fructus.

Prunus spinosa. Tiern. Arbor in Rossia australi spontanea.

ACETOSÆ

ACETOSÆ herba recens; radix.

Rumex acetoſa Shtſhavel, planta perennis in omni Roſſia, et Siberia ſpontanea.

ACETOSELLÆ *herba recens*.

Oxalis acetoſella. Kiſlitza vel Orobinetz. Planta perennis in Roſſia ſeptentrionali, et Siberia ſpontanea.

ACETUM VINI. Reinſkovoi ookſoos. Ab exteris vel a Roſſia auſtrali.

ACETUM VULGARE, Proſtoi vel Pivnoi ookſoos. E cereviſia, vel e cremati reſiduo, in Roſſia paratur.

ACONITI, herba.

Aconitum Napellus. Boretz proſtrelnaia trava, Pregral Liutik, planta perennis, in Roſſia temperata, et Siberia auſtrali ſpontanea.

From this ſhort ſpecimen, our readers will readily be able to underſtand the plan followed in the Pharmacopœia Roſſica, with reſpect to the liſt of the Materia Medica. In the original, the Ruſſian name of each article is printed in the Ruſſian character. But, for want of the proper types, we have here been obliged to employ the Roman character. With reſpect to the articles introduced into this liſt, the Authors obſerve in their preface, " In medicamentorum ſimplicium

"delectu, severa nimis censura uti non placuit." Accordingly, several articles which do not now in general support the character which they formerly had, and which have been rejected from other Pharmacopœias, have nevertheless obtained a place in this list. It must also be observed, that they have adopted several articles which have not yet obtained a place in almost any other Pharmacopœia. Among other articles not yet adopted by the Edinburgh College, which they have inserted in their list, we may mention the following, Folia recentia alni, Nuclei amygdali Nanæ, fructus Cacao, radix Caricis, Coccus Polonicus, cortex Conessi, radix Crambes, radix Lobeliæ, radix Mungos, faba Pechurim, lignum radicis Quassiæ, herba Rhododendri, semen Sabadillæ, radix Salab, herba Salicariæ, cortex Salicis fragilis, et Salicis pentandræ, herba cum radice Spigeliæ anthelmiæ, radix Spigeliæ Marilandicæ, Spongia, *&c.*

The articles in this list are upwards of four hundred in number. To the list a note is subjoined, in which it is observed, that there are several other simples lately introduced into practice, the powers of which are well attested. But as the members of the Imperial College of Physicians

Phyſicians at St Peterſburgh have not had an opportunity of aſcertaining the uſe of theſe articles by their own experience, and as they think that farther trials are ſtill wanting for eſtabliſhing their character, they recommend them to the induſtry and attention of the Ruſſian practitioners. Of theſe, the following may be given as examples. Oenanthæ crocata, folia Laurocerasi, flores Cardamines pratenſis, Digitalis purpurea, Sedum rupeſtre and Phytolacca decandra, from the vegetable kingdom; the Meloe Maialis and Proſcarabæus, from the animal kingdom.

In the ſecond part of this work, which conſiſts of the *Præparata & Compoſita*, the whole articles are alſo arranged in alphabetical order. With regard to particular preſcriptions, we cannot pretend to offer any remarks; we may only obſerve, that the directions given for the different preparations, appear to us to be extremely judicious; and although there may, perhaps, be ſome exceptions, yet the formulæ are, upon the whole, both elegant and efficacious.

XXI.

Medical Tracts, by the late John Wall, M. D. *of Worcester; collected and republished by* Martin Wall, M. D. 8*vo*. Oxford.

ALTHOUGH the collection now before us has been already presented to the public, either through the medium of the Philosophical Transactions, or in separate pamphlets; yet as none of the papers contained in it, have ever had an opportunity of appearing in the Medical Commentaries, and as the subjects treated of are all highly interesting to practitioners, we shall here therefore present our readers with a short analysis of their contents.

Article I. treats of the extraordinary effects of musk in convulsive disorders, *&c.*

A variety of cases are here related, in which the antispasmodic effects of musk were very remarkable; and the instances given are sufficient, our Author thinks, to prove, that musk is a medicine of uncommon efficacy in convulsive disorders. He affirms, that when given in its due dose, it has scarcely ever failed to answer his expectations. He has sometimes indeed been obliged

obliged to repeat the dofe three or four times; but it has always anfwered at laft, in every cafe where he had reafon to expect it fhould. This medicine, from its fcarcity, being more liable to fophiftication than almoft any other, is the reafon Dr Wall fuppofes of its failing fo frequently with practitioners, who are not attentive to the quality of the mufk which they prefcribe.

Under the quantity of fix grains he never found much benefit from it; and it fucceeds beft when given to ten and upwards. In the larger quantities, it never fails to produce a mild diaphorefis, without at all heating or giving any uneafinefs to the patient. On the contrary, it raifes his fpirits, and eafes his pains; and after the fweat breaks out, he commonly falls into a refrefhing fleep.

Of the feveral cafes related by Dr Wall on the effects of mufk, we fhall here felect two. The Doctor was called to a girl feven years old, who had been ill of a fever for about four weeks. For the laft ten or twelve days, fhe had been fenfelefs and fpeechlefs; had been liable to ftrong convulfions, and could fcarce fwallow any thing. Previous to the Doctor's vifit, fhe had had a general tetanus; and at this time every

muſcle was by turns convulſed. Her head, in particular, was ſo forcibly drawn backward as at different times to raiſe her body from off the bed.

As ſhe ſwallowed with much difficulty, twelve grains of muſk, ground with oil and ſugar, and mixed with ſome thin broth, were thrown up by way of glyſter.

In an hour's time after the firſt glyſter, the convulſions manifeſtly abated, and the ſecond entirely removed them. The child ſoon recovered its underſtanding and ſpeech, and at laſt got quite well.

About the ſame time, the Doctor was called to a girl ten years of age, who had been ſeized with convulſions three days before. Upon the attack of the fit, ſhe uſually complained of a violent pain in her belly and loins, which ſhe ſaid ſeemed to draw her bowels on a heap: After this, ſhe ſoon loſt her ſenſes, and was variouſly convulſed, not much unlike one in an epileptic fit. From the firſt ſeizure, ſhe ſeldom had an hour's interval between the fits. Twelve grains of muſk were ordered to be given in a glyſter, which was thrown up in the decline of the paroxyſm. Upon this ſhe inſtantly recovered, and

has

has never been so affected since, proper care being taken to remove the stimulus which occasioned these spasms.

Article II. contains observations on the use of the Peruvian bark in small pox.

Various cases are here related of the good effects obtained from Peruvian bark, in small pox attended with petechiæ or gangrenous symptoms. Dr Wall, in such instances, prefers the extract to every other form of the medicine, as being the least nauseous of any; and he recommends as an useful addition, considerable quantities of alum; the styptic and antiseptic virtues of which, he observes, point it out as a valuable remedy wherever the solids have been relaxed, and a putrescency has occurred in the blood and juices.

Article III. contains a dissertation on the cure of the putrid sore throat.

This fatal disease first made its appearance, we are told, in the county of Worcester about the beginning of the year 1748. It then went generally under the name of the scarlet fever, the complaint in the throat not being much attended to, or at least looked upon only as an accidental symptom; but it was soon discovered, that

that the principal ſeat of the diſeaſe was in the parts about the fauces, and that the ſcarlet efflo-reſcence on the ſkin was rather an accidental ſymptom than eſſential to the diſeaſe.

At firſt, blood-letting, nitrous, and other cooling medicines, were preſcribed; but all the caſes ſo treated uniformly terminating fatally, the uſe of bark and other antiſeptics were at laſt had recourſe to. Dr Wall, in this complaint, depends very much on the application of the antiſeptic ſteams of vinegar, myrrh and honey, to the parts affected. Applied in the form of ſteam, they are much more powerful, he obſerves, than when uſed as gargles; and by the ſole uſe of theſe ſteams, he has known the putrefaction ſtopped, when the diſorder had been but ſlight.

Articles IV. and V. contain obſervations on the efficacy of oil in worm-caſes.

Different caſes are here related, which appeared to originate from worms, and which were cured by the internal exhibition of conſiderable quantities of oil. The following is the form of uſing it as recommended by Dr Wall. ℞. Olei olivarum, lb. ſſ. Spt. vol. aromat. dr. ii. M. cap. cochl. iii. mane & h. ſ.

Article

Article VI. contains experiments and obſervations on the Malvern waters, a ſpring in the neighbourhood of Worceſter, which has been long famous for the cure of diſorders of the eyes, ſcrophulous affections, old ulcers, leproſies, and other diſeaſes of the ſkin.

Various hiſtories are here given of the ſurpriſing influence of theſe waters in the cure of theſe diſorders, by the late Dr Wall; and a very ingenious analyſis of the contents of Malvern water is ſubjoined by Dr Martin Wall.

From Dr Wall's analyſis of this water, it appears, that it does not contain any uncombined vitriolic acid, nor any volatile alkali, nor any metallic ſalt; that it is ſlightly impregnated with fixed air; contains ſome common air, ſome ſelenites, and ſome unneutralized calcareous earth.

XXII.

A radical and expeditious Cure for a recent Catarrhous Cough; preceded by ſome Obſervations on Reſpiration; with occaſional and practical Remarks on ſome other Diſeaſes of the Lungs. To which is added, a Chapter on the Vis Vitæ, ſo far as it is concerned in Preſerving and Reinſtating the Health of an Animal. By John Mudge, F. R. S. *Surgeon at Plymouth.* 3d Edit. 8*vo.* London.

THE conſideration of the catarrhous cough, which is the principal object of this publication, is the ſubject of the third chapter. In the firſt and ſecond chapters, we are favoured with ſome obſervations on reſpiration, together with remarks on ſome other diſeaſes to which the lungs are liable; but as we wiſh to convey as clear an idea as poſſible of our Author's practice in the catarrhous cough, we ſhall immediately proceed to that part of the ſubject.

The catarrhous cough, or common cold, our Author thinks, might in all its ſymptoms be eaſily accounted for, merely from an obſtructed perſpiration

perſpiration over the ſurface of the body, but more eſpecially from an obſtruction of that perſpirable matter, which in a ſtate of health is continually thrown off by the lungs. He is of opinion, however, that independently of an obſtructed perſpiration, which in this diſeaſe he ſuppoſes always to occur, a thickened, dry, inflamed ſtate of the membrane lining the lungs always takes place at the ſame time; and this he thinks is rendered very evident, by the actual pain and ſoreneſs which the cough occaſions through the whole wind-pipe and breaſt on the firſt appearance of the diſorder.

It was from a conviction that the catarrhous cough aroſe from ſome degree of real inflammation in the pituitary membrane of the lungs, that the idea of curing the diſorder by warm ſteams was firſt ſuggeſted to our Author; for, if the diſeaſe of the membrane is only the effects of a cauſe which is topical, ſudden and temporary, it becomes reaſonable to ſuppoſe, that a well adapted local remedy would be productive of the ſame good conſequences in this as in any other ſpecies of inflammation.

In this view, he obſerves, the two great indications would be, to prevent as much as poſſible

the

the irritation arifing from the convulfive fhocks of the cough on the inflamed parts, and to remove the inflammation itfelf by fuch emollient applications as can conveniently be adminiftered to them.

Thofe intentions Mr Mudge obferves are thoroughly anfwered, by opium, and by inhaling warm fteams into the lungs; for by the firft, the internal furface of the afpera arteria and bronchiæ, are, during the effect of the medicine, rendered in a great meafure infenfible to the mifchievous irritation to which they would otherways be fubject; and the application of the warm vapour, under the protection of the opiate, by acting like a fotus, and in oppofition to the very caufe by which the diforder was produced, refolves the inflammation, by unloading the turgid capillaries of the pituitary membrane.

Whether this reafoning be admitted or not, the fact, our Author obferves, is paft difpute, that the conjoined powers of thofe remedies are a fure, and, in general, an immediate cure. It is in that fpecies of cough only, however, that occurs from what we call taking cold, and in the commencement of the diforder only, that their effects prove fo powerful. In more advanced

ftages

ſtages of the diſorder indeed, a proper uſe of the inhaler generally does produce ſome good effects; but in order to obtain all the advantages to be derived from it, it ought to be had recourſe to, either on the evening of the day on which the complaint has firſt appeared, or at fartheſt on that of the ſucceeding one.

A drawing of the inhaling veſſel, as invented by our Author, is here given; but as the nature of our Work does not admit of plates, we muſt reſt ſatisfied with giving them an accurate deſcription of it.

The body of the inſtrument holds about a pint; and the handle, which is fixed to the ſide of it, is hollow. There is in the lower part of the veſſel, where it is ſoldered to the handle, a hole, by means of which, and three others on the upper part of the handle, the water, when poured into the inhaler, will riſe to the ſame level in both. To the middle of the cover, which is made to fit the mouth of the inhaler exactly, a flexible tube, about five or ſix inches long, is fixed, with a mouthpiece of wood or ivory. Underneath the cover there is a valve fixed, which opens and ſhuts the communication between the upper and internal part of the inhaler and

and the external air, for a purpofe to be afterwards explained.

When the mouth is applied to the end of the tube in the act of infpiration, the air rufhes into the handle and up through the body of warm water; and the lungs become confequently filled with hot vapour. In expiration, the mouth being ftill fixed to the tube, the breath, together with the fteam on the furface of the water in the inhaler, is forced up through the valve in the cover. In this manner, therefore, the whole act of refpiration is performed through the inhaler, without the neceffity in the act of expiration of either breathing through the nofe, or removing the pipe from the mouth.—So far our Author's defcription of the inftrument. We now come to the application of his practice in the difeafe under confideration.

In the evening, a little before bed-time, the patient, if of adult age, is to take three drams of elixir paregoricum, which contains about three quarters of a grain of opium, in a glafs of water. If the fubject be younger, the dofe muft be proportionally lefs. About three quarters of an hour after, the patient fhould go to bed, and being covered warm, the inhaler three parts filled

led with water nearly boiling, and being wrapped up in a napkin, but ſo that the valve in the cover is not obſtructed by it, is to be placed at the arm-pit; and the bed-cloaths being drawn up and over it cloſe to the throat, the tube is to be applied to the mouth, and the patient ſhould inſpire and expire through it about twenty minutes or half an hour.

The great uſes of this particular conſtruction are the following: 1*ſt*, As there is no neceſſity at the end of every inſpiration to remove the tube from the mouth, in order to expire from the lungs the vapour which had been received into them, this machine, therefore, may be uſed with as much eaſe by children as older people. And, 2*dly*, As a feveriſh habit frequently accompanies the diſorder, the valve in that alſo is of the utmoſt importance; for a ſweat, or at leaſt a free perſpiration, not only relieves the patient from the reſtleſs anxiety of a hot, dry, and ſometimes parched ſkin; but is alſo of all evacuations the moſt eligible for removing the fever; and it uſually happens, our Author obſerves, after the inhaler ſo conſtructed hath been uſed a few minutes, that the warm vapour under the cloaths, by ſettling upon the trunk,

produces a ſweat, which commonly ſoon becomes general.

In a catarrhous fever, or any feveriſh habit attending this cough, the patient is directed to take a draught of warm thin whey a few minutes before the inhaler is uſed; and after the proceſs is over, the ſweat which it has produced may be continued by occaſional ſmall draughts of weak warm whey or barley water.

After this reſpiratory proceſs is over, the patient uſually paſſes the night without the leaſt interruption from the cough; and feels no farther moleſtation from it, than once or twice in the morning to throw off the trifling leakage, which, unperceived, our Author obſerves, had dropped into the bronchiæ and veſicles during the night.

Tender valetudinary people being in general very well acquainted with the firſt notices of this diſorder, the remedy, as was already obſerved, ought to be uſed the ſame evening, which will, in an ordinary ſeizure, we are told, be attended with an immediate cure; but if the ſoreneſs of the reſpiratory organs, or the petulance of the cough, ſhew the cold which has been contracted to have been very ſevere, the inhaler, without the

the opiate, ſhould be again repeated for the ſame time the next morning.

But, when the uſe of the inhaler has been delayed till the ſecond night, it will always be right, our Author remarks, to repeat it again next morning without the opiate, but with it when the ſeizure has been violent.

And again, when the cough has been of ſome days ſtanding, it will always be neceſſary, we are told, to employ both parts of the proceſs at night, and the ſucceeding morning likeways, as the firſt inflammatory miſchief is at this time moſt probably aggravated by an additional one of a chronic tendency.

When, from neglect or other circumſtances, the cough becomes too violent to be removed by this remedy, gum ammoniac, with gentle opiates, are much recommended by our Author, both from the authority of Sir John Pringle, and from the reſult of his own experience.

But if, notwithſtanding theſe and other means, the cough continuing dry or unattended with a proper expectoration, ſhould perſevere in haraſſing the patient; if, at laſt, it ſhould produce, together with a ſoreneſs, ſhooting pains through the breaſt and between the ſhoulders,

attended alſo with ſhortneſs of breath; and if, added to this, fluſhing of the cheeks after meals, ſcalding on the hands and feet, and other ſymptoms of a hectic, ſhould accompany the diſorder; in this dangerous ſituation, our Author aſſerts, from long experience, that, accompanied with change of air and occaſional bleedings, the patient will find his greateſt ſecurity in a drain from a large ſcapulary iſſue, aſſiſted by a diet of aſs's milk and vegetables.

XXIII.

Experiments upon Vegetables, diſcovering their great Power of purifying the common Air in the Sunſhine, and of injuring it in the Shade and at Night: To which is joined, a new Method of examining the accurate Degree of Salubrity of the Atmoſphere. By John Ingen-Houſz, M. D. F. R. S. 8*vo.* London.

SEVERAL years ago, that accurate philoſopher, the Rev. Dr Prieſtley, in his experiments on different kinds of air, made the important diſcovery of the wonderful powers that all plants poſſeſs, to a greater or leſs degree, of correcting

correcting the impurity of any bad air which at the time happens to surround them; and our Author, in the volume before us, has entered on a farther prosecution of that subject.

In experiments of this kind, we commonly find them so much connected, and one depending so much upon another, that an abridgment or analysis of them cannot with propriety be given; we must, therefore, rest satisfied with communicating to our readers the general results which Dr Ingen-Housz has drawn from these experiments.

He observed, that plants not only have a faculty to correct bad air in six or ten days, by growing in it, as the experiments of Dr Priestley indicate, but that they perform this important office in a complete manner in a few hours; and that this wonderful operation is by no means owing to the vegetation of the plant, but to the influence of the light of the sun upon the plant; a conclusion that might in part have been suggested by Dr Priestley's discovery of a like fact, exhibited in the case of the green matter yielded by certain stagnating waters, which is known to be merely a vegetable production.

He found, moreover, that plants have a moſt ſurpriſing faculty of elaborating the air which they contain, and which they are continually abſorbing from the common atmoſphere, into what philoſophers now term, *fine dephlogiſticated air;* that they pour down continually, if the expreſſion may be allowed, a ſhower of this depurated air, which diffuſing itſelf through the common maſs of the atmoſphere, contributes to render it more fit for animal life; that this operation is far from being carried on conſtantly, but begins only after the ſun has for ſome time made his appearance above the horizon, and has by his influence prepared the plants to begin anew their beneficial operation upon the air, and thus upon the animal creation, which was ſtopt during the darkneſs of the night.

He affirms, that this operation of plants, is more or leſs briſk in proportion to the clearneſs of the day, and to the expoſition of the plants being more or leſs adapted to receive the direct influence of that great luminary; that plants ſhaded by high buildings, or growing under the dark ſhade of other plants, do not perform this office, but, on the contrary, throw out an air hurtful to animals, and even contaminate the air which

which ſurrounds them; that this operation of plants diminiſhes towards the cloſe of the day, and ceaſes entirely at ſunſet, except in a few plants which continue this duty ſomewhat longer than others; that this office is not performed by the whole plant, but only by the leaves and green ſtems which ſupport them; and that the acrid, ill-ſcented, and even the moſt poiſonous plants, perform this office in common with the mildeſt and moſt ſalutary.

He maintains, that the moſt part of leaves pour out the greateſt quantity of this dephlogiſticated air from their under ſurface; that young leaves not yet come to their full perfection, yield dephlogiſticated air in leſs quantity, and of an inferior quality to that which is produced by full grown old leaves; that ſome plants elaborate dephlogiſticated air better than others; that ſome of the aquatic plants ſeem to excel in this operation; that all plants contaminate the ſurrounding air by night, and even in the day-time in ſhaded places; that ſome of thoſe, however, which are inferior to none in yielding beneficial air in the ſun-ſhine, ſurpaſs others in the power of infecting the circumambient air in the dark, even to ſuch a degree, that in a few hours they

render a great body of good air ſo noxious, that an animal placed in it loſes its life in a few ſeconds.

He contends, that all flowers render the ſurrounding air highly noxious, equally by night and by day; that the very roots removed from the ground have the ſame property, ſome few however excepted; but that, in general, fruits have the ſame deleterious quality at all times, though principally in the dark, and many to ſuch an aſtoniſhing degree, that even ſome of thoſe fruits which are the moſt delicious, as, for inſtance, peaches, contaminate ſo much the common air, as would endanger the lives of thoſe who might be ſhut into a room in which large quantities of ſuch fruits are ſtored up; and that the ſun by itſelf has no power to mend bad air without the concurrence of plants, but on the contrary is apt to contaminate it farther.

Theſe are the moſt material concluſions deducible from the experiments of Dr Ingen-Houſz. Any one who wiſhes for more particular information, will find his curioſity amply ſatisfied by a peruſal of the book itſelf.

XXIV.

Principles of Electricity; containing divers new Theorems and Experiments, together with an Analyfis of the fuperior Advantages of high and pointed Conductors, and an Explanation of an electrical returning Stroke, by which fatal Effects may be produced even at a vaft Diftance from the Place where the Lightning falls. By *Charles Vifcount Mahon*, F. R. S. *4to*. London.

IN the firft pages of the prefent performance, there occur very proper remarks on Mr Canton's well known electrometer, in which elder-pith balls are fufpended by linen threads proceeding from a common centre. It is obferved, that thefe threads fhould hang parallel, in order that the balls may diverge juftly and with a fmall force; and it is added, that the threads fhould be of fine flax, fubdivided as much as poffible. Cork-balls alfo are here fubftituted for thofe of elder-pith, for reafons not mentioned; the diameter of them, however, fcarcely exceeding $\frac{1}{16}$ of an inch, and the threads fufpending them being of the length of 8 inches.—In the following

following experiment, to prevent any twisting, the suspension of the balls was effected by fine straws, which were soaked in salt and water, to enable them to conduct the better; each leg of straw terminating at the top, in a linen thread only $\frac{1}{12}$ of an inch long.

His Lordship having first cautiously dried (by means of fire), and afterwards exhausted an air-pump receiver, so as to leave in it but $\frac{1}{117}$ part of its elastic matter, found, that the divergence of the balls placed within it, though communicating all the while with a charged conductor, diminished from $2\frac{1}{2}$ inches, (which was the distance they preserved in air), down to $\frac{1}{4}$ of an inch. In this situation, the glass-receiver itself was next electrified; but yet without much addition to the divergence of the balls. Upon returning the air, however, though the apparatus at that time received no fresh supplies of electricity, the balls diverged again considerably.—From these appearances chiefly we find, that his Lordship is led to conclude, that an electric atmosphere is composed of air contiguous to the charged body that is electrified: And, having adopted this conclusion, he deduces from it, or connects with it, various other principles.—But

the following objections have occurred to this his firſt concluſion. 1*mo*, That in a common receiver nearly exhauſted of air, the electric fluid finds a paſſage for itſelf ſo eaſy, that it admits neither of being accumulated, nor even excluded, (when negative electrification is required), except in a ſmall degree: And from this cauſe alone the balls might here diverge leſs than uſual, both in the caſe of a poſitive and of a negative electrification; ſince in the former ſituation it would be difficult to ſhut the fluid in, and in the latter caſe difficult to keep it out. And were the air-pump *inſulated* in order to prevent ſuch a paſſage, it muſt be recollected, that when the ſeveral parts of the air-pump apparatus, as well as of its vacuum, become by this means themſelves permanently charged; ſuch charges ſurrounding and operating upon the charged balls, will, to a certain degree, again check their divergence, by exerting a force on their outer ſide that tends to counteract the force that would ſeparate them on their inner ſides. 2*do*, By the laws of hydroſtatics alſo, we know that bodies increaſe or decreaſe in their apparent weights, according to the rarity or denſity of fluids they are immerſed in; ſo that the changes taking place

place in the denſity of the elaſtic matter of the receiver, in which the balls were ſuſpended, muſt be one among the reaſons why the balls tended to collapſe upon the air's exhauſtion, and to diverge ſomewhat more upon the air's return. *Laſtly*, It is well known, that electric atmoſpheres are very ſuddenly made manifeſt round bodies that are ſuddenly charged in dry air; whereas dry air, in other caſes, is not ſuppoſed capable of having charges *ſuddenly* diffuſed through it, (a perſuaſion to which his Lordſhip himſelf has appeared at times to accede): To this it may be added, that the power of dry air to inſulate charged bodies, is held to depend ſolely on its non-conducting power; charged bodies not loſing any ſenſible electricity, by being whirled through a vaſt tract of ſucceſſive portions of dry air.—Till the hypotheſis in queſtion, then, is cleared from ſuch apparent objections, it may be prudent to ſuſpend our notice of the whole of the ſuppoſed deductions that are made from it.

Two incidental circumſtances, however, are ſtated on this ſubject, which claim more immediate attention. The *firſt* is a remark, which is in fact practically taken for granted by many electricians;

electricians; namely, that in ſtrong machines the charge will not ſtrike at its greateſt diſtance upon given bodies, till *after* it has been made to ſtrike at ſome ſmaller diſtances; the charge thus bearing ſomewhat of the appearance (to ſpeak familiarly) of being gradually enticed forwards. His Lordſhip, who ſuppoſes that it is the *electricity itſelf*, contained in an electric atmoſphere, which ſerves ſuddenly to conduct away that charge, attributes this appearance to the previous diſcharges having left ſome of their electricity behind them in the air, ſo as thereby to increaſe its conducting powers: But it may poſſibly rather be owing to the air being now ſo ſaturated with electricity, as no longer to deduct any thing from the ſucceeding fluid while in its paſſage through it; and conſequently, to admit a more diſtant projection of the ſucceeding ſtroke now that it is preſerved entire. But perhaps the caſe may require ſome few experiments, to eſtabliſh more fully both the particulars of the fact, and of the theory by which to explain it. As to the *ſecond* of the circumſtances alluded to above, as mentioned by his Lordſhip, it is an experiment ſtated to have been made by Mr Achard of Berlin, who is ſaid to have found, that

that a more tapering point not only ſilently diſcharges more electrical fluid than a leſs tapering one, but even more than *nine* tapering points diſtributed upon a poliſhed metal baſe of an *inch* in diameter; which his Lordſhip attributes to the ſingle tapering point having jutted out beyond the atmoſphere of electrified air ſubſiſting in the contiguous charged bodies, and having of itſelf no ſufficient ſurface to form any ſuch atmoſphere of its own; whence it makes leſs reſiſtance both to the entrance and the exit of foreign fluids, than happens in the other two caſes, where more accumulated atmoſpheres are found oppoſing.

His Lordſhip, quitting for the preſent this part of his ſubject, next proceeds to the caſe of an *inſulated body* plunged in an oppoſitely charged atmoſphere; in conſequence of which, it is known immediately to become divided into a poſitive, negative and neutral ſtate, reſpecting its own proper electricity; (as is here proved at large by a ſet of expreſs experiments). But his Lordſhip now goes on to add *, with reſpect to the *neutral* point, that it muſt by theory always lie in that plane which divides the whole maſs of

* § 95.

of the fluid into *equal* portions: And, in order to find out by a farther theory the place of this *plane itſelf*, he enters * into a mathematical diſcuſſion of its neceſſary ſituation, in the two caſes of the denſity of the fluid being either in the ſimple inverſe ratio, or elſe in the inverſe ratio of the ſquare, of the diſtance; and he is led to affirm, from a mixture of experiments and of calculation †, that the ſituation which belongs to it upon the latter hypotheſis, is that which it poſſeſſes in fact. He concludes by ſaying, however, that great care is to be obſerved in the experiments; and that very important reſults are moreover to be drawn from the law itſelf; which reſults he promiſes to ſtate in another work, together with the reaſon of the law.

His Lordſhip now ‡ comes to ſpeak in a more general way, of the *returning ſtroke* ariſing from that ſudden reſtoration of balance to the [natural] fluid in conducting bodies, which follows upon the ſudden removal of any charge in neighbouring bodies that had occaſioned a diſturbance of it. The fact, thus generally ſtated, is certainly not unknown to many electricians; but his Lordſhip ſeems to have been the firſt who has

* § 108, and 129. † § 149. ‡ § 202, and 248.

has made it a direct object of consideration; and while he is illustrating the case by experiments, it is observable, that he throws a variety into these experiments, which tends to confirm his own opinion in favour of the influence of points. The power of this stroke, his Lordship goes on to say, is in particular increased, both by increasing the surface of the immerged body, and by using proper management as to the distances; and we farther find it stated, that by too close a situation to the conductor, we may diminish the direct stroke at the same moment that we increase the returning one.

A summary, however, of these and other maxims being given in § 307, we go on to his Lordship's consideration of the *effect* of the returning stroke in the greater operations of nature; where he supposes, that in a suite of similarly charged and connecting clouds, injury may proceed in one place from a direct stroke, in a second place from a returning stroke, while a third very extensively *intervening space* shall perfectly escape injury from every kind of stroke whatever. The cases of injuries, owing to a returning stroke from lightning, have certainly never been described as such; yet the silence observable

ſervable on this head, we find attributed merely to the circumſtance of no one being aware that ſtrokes of ſuch a nature could exiſt: For his Lordſhip conceives, that where people have been merely knocked down at the time of a flaſh, or have had their ſhoes torn, or have obſerved electric effects at half a mile or a mile's diſtance, for inſtance, from the place of the direct ſtroke, or have diſcovered ſparks at theſe times paſſing along a broken metallic communication; the returning ſtroke was in all theſe ſeveral caſes actually taking place.

His Lordſhip moreover adds, that, againſt this returning ſtroke, common *blunt* conductors cannot give us complete ſecurity; nor yet even the inſulation of the ſpectator, if ſtrongly affected by the preſſure of the cloud's electric atmoſphere, unleſs ſituated at the ſame time apart from other conducting ſubſtances. As to the objection ariſing from the *diſtance* of the places ſuppoſed intereſted in this effect, though one or more *miles* aſunder, his Lordſhip does not attend to this as having much weight: But he more particularly anticipates the objection to be drawn from the ſmall quantity of fluid that in ſome of theſe caſes muſt be ſuppoſed likely to

return, in conſequence of the *body* to which it belongs being itſelf but ſmall: For his Lordſhip attributes the effect here chiefly to the *ſuddenneſs* of the return; and, as a ſmall and weakly charged prime conductor produces ſome effect, he ſuppoſes the immenſe compaſs, as well as ſtrength of operation in the atmoſphere of a thunder cloud, will produce a greater effect in an exact proportion. Perhaps, however, there is conſiderably too much influence attributed to this returning ſtroke, where the body ſubjected to it either communicates with no ulterior conducting ſubſtances, but remains as in a *cul de ſac;* or elſe, though it ſhould communicate with ſuch ulterior conductors, is outdone in its conducting power by the neighbourhood of a proper metallic communication, (well connected with the moiſt earth below, and with the charge above). It may alſo admit of farther remark, that his Lordſhip in *this* place appears to have neglected a particular ſuppoſition that might have added much weight to his apprehenſion of danger from this returning ſtroke, which is this; if a *detached* lower cloud has its own proper fluid diſturbed in its poſition by an approach to a higher charged cloud, and ſuffers an alteration in quantity

tity during this precise situation, by having accidentally communicated, for instance, with some lower conducting body; whenever the discharge of the higher cloud occurs, it is plain that the lower detached cloud will instantly seek the recovery, not only of the just position, but of the just *quantity* of its own fluid; in which case, if bodies that intervene between it and the earth, are made use of to transmit the difference, a proper returning stroke will take place, to the possible violent injury of various bodies which have their share in such transmission.

But, coming back again to his Lordship, we shall find him next bestowing his attention on the effect of *blunt and pointed terminations*, both on charged clouds and their electric atmospheres. And here he denies (perhaps prematurely) that there is any proper attraction or invitation in the case, either of balls or points; but says, that the cloud merely thrusts off its charge against each of them; and that while the ball, by its atmosphere of charged air, offers resistance to a passage, the point, from its want of such atmosphere, admits of an easy passage; the fluid, he supposes, flowing through the point much after the manner that water flows through a *pipe*.

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His Lordſhip then proceeds to ſay, that lightning may injure under the form of a direct, of a lateral, and of a returning ſtroke. On the caſe of the *direct* ſtroke, whether conſidered as impending immediately from a primary cloud, or more mediately from a dependent one, he produces facts in favour of points that are on the whole pretty ſimilar to thoſe urged by various other electricians; and, in ſituations where the point is perfect in its communication with the moiſt earth, he ſays it will ſilently and gradually diſperſe a charge, before it arrives at its ſtriking diſtance; an advantage which he affirms cannot properly attend the uſe of balls. As to the *lateral* and *returning* ſtrokes; when the direct ſtroke, which is the cauſe of them, is prevented or leſſened, nothing can be clearer, he obſerves, than that other ſtrokes which are the effects of it, will alſo be prevented or leſſened; an aſſertion, as far as it relates to the returning ſtroke, that is here ſupported by freſh experiments.

In § 519, his Lordſhip enumerates a number of rules to be attended to in erecting conductors for lightning.

In § 545, his Lordſhip introduces the mention of another farther advantage which he attributes

tributes to pointed rods; namely, that of their operating moſt powerfully when the clouds are moſt ſtrongly charged. He gives his reaſons for this pretty much at length; ſome of which partake of his own peculiar theory; but it will be thought the more obvious of his ſeveral explanations, to ſay, that in this ſituation the fluid has an *increaſed* tendency to preſs againſt and enter the point. It is very properly hinted in this place by his Lordſhip, that as the low clouds from their poſition neceſſarily get rid of a charge as ſoon as it tends to become in any degree particularly formidable; the moſt powerful ſtrokes are thoſe which proceed from the *higher* and more diſtant clouds; and it is equally properly added, that when the *air* [below * the clouds] is

* The aſſertion is here limited to the air below the clouds; becauſe, in the upper regions, it is amidſt moiſt air and clouds that the charge both ſubſiſts and is produced. In § 568, theſe circumſtances again appear to be forgotten, when we are told, that clouds find it moſt difficult to recruit their electricity when the air is very dry; whereas the ſtate of the air below is not only no mark of the ſtate of the air above; but were it allowed as a mark, the moiſture that is found prevailing lower down, may have very different operations from that which is found or generated higher up.

is *dry*, this incident again will contribute to the power of the ſtroke. It is in proportion, however, to all theſe dangers, that his Lordſhip confides in his *point*.

In the APPENDIX, with which the whole concludes, his Lordſhip mentions ſome things not yet ſpoken of, and which are well worthy of our notice. 1*mo*, We have a caſe produced, in which, by making the inſulated body much larger than the charged body to which it is contiguous, the *returning* ſtroke is obtained even ſtronger than the *direct* one; which appears ſingular, and in particular caſes may become important to be attended to; yet in fact may be found only to reſemble that difference of ſtroke known to proceed from ſmall compared with large prime conductors, from weak compared with powerful Leyden jars, though both conductors and jars have been ſucceſſively charged from the ſame electrical machine. But, without ſtopping for ſuch explanation as might perhaps be given to theſe circumſtances, we ſhall only farther obſerve, that his Lordſhip, in reaſoning upon his own experiment, does not appear to conſider altogether enough, that the ſame human body, which at one time judged of the

the ſtroke, by augmenting the bulk of the apparatus, helped alſo to increaſe its force. 2*do*, In order to confirm an hypotheſis concerning the dependence of the force of the returning ſtroke, on the degree of ſuddenneſs with which the fluid reverts to its juſt diſtribution, his Lordſhip relates a caſe of a very large charge, which he had taken without permanent inconvenience, merely in conſequence of its being conveyed to him ſlowly by means of bad conductors. 3*tio*, His Lordſhip ſilently diſperſed a charge only by preſenting to it a wire as thin as a fine horſe-hair, whoſe pointed ends were all the time covered with wax. Many electricians have ſilently diſperſed a charge by a pointed ſubſtance, which, though it had depth of matter, wanted both length and breadth; and others have diſperſed it by an edge, which, though it had depth and length, wanted breadth; but it ſeems to have been his Lordſhip who firſt thought of uſing ſubſtances like wires, which reſemble lines in having length, but which want both depth and breadth. 4*to*, We are next to remark, that cautions are given to thoſe who, for the purpoſe of experiment, wiſh to conſtruct an apparatus for collecting electricity from the clouds. 5*to*, In the laſt place, his Lordſhip ob-

ſerves, that a coating of certain non-conducting ſubſtances enabled a very ſmall wire to bear a higher ſtroke than uſual without becoming exploded: But perhaps it is to be doubted, whether his Lordſhip has explained the whole of the circumſtances, when he attributes this to the coating having firſt fuſed, and then, by becoming a conductor, in effect adding to the ſubſtance of the wire. It ſeems beſt, therefore, to examine this matter by further experiments.

On the whole, concerning this performance, it remains only to remark, that the noble Author has proved himſelf a moſt laborious inveſtigator, and an equally faithful relater; and that his love of inquiry is as rare as it is meritorious in one of his rank. His acquaintance with the mathematics (which is well known to be a ſort of inheritance from his noble father the Earl of Stanhope), may perhaps be thought too much applied at certain moments; and his experiments may alſo ſeem too extenſively related, in caſes where a table (like that uſed by Dr M'Bride in his Inquiries upon Fixed Air) would perhaps have exhibited them more intelligibly and more uſefully; but theſe objections, with others concerning the too frequent uſe of Italics, and the general

general mode of divifion applied to the Work, would fcarcely be worth repeating, in a cafe where there are fo many merits, were it not that his Lordfhip promifes other publications (on Leyden jars, points, and balls, *&c.*), where thefe circumftances may perhaps be differently attended to. We conclude here, therefore, with obferving, that the prefent publication is certainly a refpectable one, and contains facts materially worthy attention; as will perhaps have appeared from the analyfis of it above given.

XXV.

Differtatio Botanico-Medica de Catechu. Auctore Carolo-Henrico Wortmuller. Goettingæ. *4to.*

THIS fubftance was known to *Gracias ab Horto*, fo far back as the year 1563. He defcribes it under the name of *Cate*, according to the idiom of the Indian nation among whom he lived. *Wolfgangus Wedelius*, in the year 1671, fpeaks of it as having been introduced into Europe but a few years before; and, at the fame time, mentions feveral fuccefsful trials made with it in difeafes. Our Author, after enumerating

rating a variety of names, by which catechu has been known, and which he thinks have chiefly originated from the different mode of pronunciation uſed by European nations, obſerves, that the French have given it the name of *terra Japonica;* which has been productive of two miſtakes which have long prevailed; the one, that catechu is an earthy ſubſtance; the other, that it originally came from Japan. Our Author, upon the authority of *Cleyer*, obſerves, that this juice was carried in great quantity by the Moors and Chineſe to Japan. He next proceeds to inquire from what plant, and from what part of the plant, catechu is produced. The *areca*, a well known tree in Indoſtan, appears, from a variety of authorities, to be the one from which catechu is procured.

Our Author joins in opinion with Mr Kerr, who reſided for ſome time in Bengal, in referring the *areca* to the genus of plants known by the name of *mimoſa*.

After deſcribing the mimoſæ in general, we are preſented with a particular account of that ſpecies which affords the catechu. The method of preparing catechu is the next object of conſideration, which is narrated upon the authority

of

of Mr Kerr, from the London Medical Obſervations. From his account, it appears, that this juice is extracted from a decoction in water of the internal coloured part of the wood previouſly cut into chips. An unglazed earthen veſſel is filled with theſe chips, and a quantity of water is poured on, ſufficient to cover them, which is boiled into one half; the decoction, without previous filtration, is then thickened, till a third part only remains in a flat earthen veſſel. It is then farther inſpiſſated, by ſtanding in a cool place for one day, and afterwards by expoſure to the heat of the ſun with frequent agitation. The maſs having by theſe means acquired a conſpicuous conſiſtence, is laid upon a mat or cloth ſtrewed with aſhes of cow dung, is cut into quadrangular pieces, and perfectly dried in the ſunſhine.

Mr Wortmuller proceeds to give the marks by which the good and genuine catechu may be diſtinguiſhed from what is ſophiſticated. He prefers ſuch pieces as are externally more pure and not ſo rough as others, while at the ſame time they appear to be marked with the impreſſions of a coarſe cloth-ſearch, the internal ſubſtance of which is firmer, without interſtices, and eaſily

eafily feparated into *laminæ*, having a fhining appearance only on the edges, of a pale white or flefh colour, fometimes with fhades of a deeper brown.

He prefers fuch as, when reduced to a fubtile powder, appears of a whitifh red colour, impreffing the tongue with an aftringent and ftrong difagreeable tafte, to which an agreeable fweet one, like that of liquorice, fucceeds, and at the fame time imparting a mucilaginous quality to the faliva.

By an experiment inftituted by our Author, it appears, that catechu poffeffes very confiderable antifeptic powers.

From an accurate chemical analyfis, Mr Wortmuller concludes, that catechu confifts of a gummy and refinous part, united by the intervention of an alkaline falt.

After enumerating the different officinal preparations of catechu, as ordered in various Pharmacopœias, our Author proceeds to notice the difeafes in which it has been found ufeful; but in this part of his work we think it unneceffary to follow him; our limits will not admit of a recapitulation of what every practitioner muft be already fully acquainted with.

SECT.

SECT. II.

Medical Observations.

I.

The History of a Dropsy of the Ovarium, terminating fatally; with an Account of the Appearances on Dissection. By Cuthbert Johnson, M. D. of Sherborne, Dorset.

ANN H——r, of the parish of C—e, in Dorsetshire, aged twenty-one, about the beginning of the year 1777, observed herself greatly to increase in size. And the menstrual discharge ceasing about the same time, she declared herself pregnant by a young man who frequented

frequented her company. She continued to increafe in bulk until the ufual period of geftation was fome time paft; when feveral eminent practitioners in midwifery were from time to time confulted, who upon examination declared her not to be pregnant. But from an hard fubftance which might be felt through the teguments of the abdomen, feemingly about the bignefs of a child's head, one of the gentlemen was inclined to think there was an extra-uterine conception. A variety of medicines were adminiftered without effect.

When I firft vifited her, in July 1778, fhe appeared to be bigger than moft women with child are at their full time. Her flefh was a good deal wafted, yet her appetite not bad; and I was informed that a few weeks before, fhe had thrown up four or five quarts of a brownifh fluid. I could not be clear that I felt any fluctuation by gently ftriking the abdomen; but I could eafily feel the hard round moveable body under my hand. Upon confideration of the cafe, I was of opinion it was a dropfy of the ovarium, and propofed tapping as the only meafure from which relief could be hoped for under fuch circumftances. Being weary of the burden, fhe readily

dily complied, and the attending ſurgeon, with a common-ſized trocar, drew off about five pints of a ropy fluid; no more could be obtained by preſſure upon the abdomen, or movement of the canula. About this time her left leg and thigh became anaſarcous; and two months after, ſhe deſired to be tapped again, which was performed with a trocar of the largeſt bore in uſe. A gallon of fluid was obtained, of the ſame conſiſtence with the firſt, and tinged with blood; ſhe declared ſhe would not undergo another operation, and ſurvived this only eight days. A call to a patient at a diſtance prevented my being preſent at the opening of her body. The following account I had from one of the ſurgeons preſent.

Upon opening the abdomen, about nine quarts of a bloody fluid were diſcharged; the uterus was found in its natural unimpregnated ſtate. The left ovarium was ſound and perfect; the right ovarium appeared to be a large fleſhy maſs, which, when cut out, weighed nine pounds. It was of a roundiſh form, and had been pierced by the trocar at the laſt operation; it adhered to the neighbouring parts, and was full of large cyſts, which contained a quantity of browniſh, greeniſh,

greenifh, and other coloured glutinous matter. The liver, ftomach, and inteftines, were in a found ftate.

II.

The Hiftory of a Cafe of Rheumatifm cured by the Volatile Elixir of Guaiacum; communicated in a Letter from Dr Thomas Fowler, *Phyfician at* Stafford, *to Dr* Duncan.

SINCE the introduction of the liberal ufe of the tinctura guaiacina volatilis into practice in the treatment of rheumatifms, I have had feveral opportunities of feeing the good effects of this medicine in certain chronic cafes, which you have juftly obferved to be of an intermediate nature, being neither wholly phlogiftic nor atonic.

A remarkable inftance of this fort, a lumbago, I have had under my care this month, and think it very fimilar to the ftrongly marked cafe of Sarah Mills, fuccefsfully treated with the fame medicine, as related in your firft volume of Medical Cafes. In acute cafes I have alfo feen the moft wonderful effects from this medicine,

cine, exhibited according to Dr Dawſon's directions; although, from theory, one might juſtly be afraid of its ſtimulating powers. At the ſame time, from experience, I am quite of your opinion, that its effects are very inconſiderable in caſes purely atonic, and of long ſtanding.

I find, agreeable to Dr Dawſon's obſervations, that this medicine anſwers the beſt, when it acts both as a ſudorific and laxative, giving two or three ſtools in twenty-four hours; and, in acute caſes, that veneſection ought to be premiſed.

The following caſe affords a ſtriking example of the good effects of it:

Joſeph Stephenſon, aged thirty-ſix, was admitted an out-patient to the Stafford Infirmary, Auguſt 6. 1779.

He is a farmer's ſervant, of a ſtrong healthy conſtitution, and complains of a conſtant deep ſeated pain in his loins, extending down to the os ſacrum; alſo to both his hips, and down his thighs, eſpecially on the right ſide.

The pain in his loins is ſo acute, that he can neither raiſe his body erect, nor yet bend it in the leaſt forward from the preſent inclined poſition. He ſays, that he ſuffers the moſt when ſitting down, or riſing from his ſeat, particularly

the latter; alſo, that his pains are always aggravated within half an hour, or an hour, after being in bed; and that all the parts affected are very ſore to the touch.

His pulſe is natural, and moderately ſtrong; his appetite good; his ſleep much diſturbed from pains; and his body has been all along bound, except when opened by medicines.

His complaints began on the 12th of July, with feveriſh ſymptoms, which only went off about a week ago, when his appetite returned. He has been once bled and bliſtered, and has taken ſome opening medicines. He attributes his diſorder to catching cold. Capiat elixir guaiacini volatilis unc. ſſ. in unc. ii. aquæ puræ, cum regimine, omni nocte.

Let him avoid all fermented liquors, and live chiefly on vegetables.

August 9th.

His medicine, aſſiſted by repeated draughts of warm balm-tea, has ſweated him freely, for ſix or ſeven hours every night, and given him two looſe ſtools every 24 hours, with conſiderable relief, even from the firſt exhibition; and he now finds himſelf much eaſier from pain, both in his loins, hips, and thighs. Continuetur

tur elixir guaiacinum volatile ut antea. Utatur æger pediluvio omni nocte horâ decubitus.

August 14th.

The elixir has continued to ſweat him very freely every night, and has given three or four looſe ſtools every 24 hours, with progreſſive relief. The pains in his hips are very nearly gone; thoſe of his thighs much leſſened; and the pain of his loins ſo much abated, that he can bend his body half way to the ground without inconvenience. His appetite continues very good, and he ſleeps well.

Continuetur elixir guaiacinum volatile cum regimine: omittatur pediluvium.

August 18th.

The elixir has continued to operate, both by ſweat and ſtool, as uſual, and with the ſame advantage; for, within theſe laſt two days, all his complaints have entirely gone off, except a very ſlight pain remaining in his right thigh. He can now ſtoop to the ground without pain; and yeſterday was able to move, for eight or nine hours, without inconvenience; and thinks himſelf well enough to go through his uſual labour.

Omittatur medicamentum.—Let him be dismissed.

N. B. August 26th. I have seen this patient at work to-day, and find, that in a day or two after the last report, the slight pain in his thigh vanished, and that he has continued perfectly well ever since.

III.

The History of a Case of Puerperal Fever; with Remarks on the Treatment of that Affection in general: Communicated to Dr Duncan *by Dr* Edward Johnstone *of* Kidderminster.

M. P. a young woman lying-in of her first child, was, on the second day after delivery, seized with a violent puerperal fever. My father (Dr Johnston of Kidderminster) was called to see her, after she had been ill three days.—He found her pulse exceedingly rapid, and rather vacillating, but with frequent hard strokes. She had severe pain in the lower region of her belly, which returned by fits, and made her shriek. Her belly was inflated, and she could scarce bear the weight of the hand upon it. She had but few stools, and made

water regularly.—Her milk and lochia had been ſuppreſſed from the ſecond day after delivery.—She complained of great ſickneſs, and immenſe thirſt; and was continually craving for cold drink. Barley-water and gruel were ordered for common drink. A glyſter, with half an ounce of oil, as much manna, and a ſcruple of nitre, were ordered to to be injected daily; and the following draught and mixture.

℞. Tart. emet. gran. unum, Pulv. rhei, ſcrup. ii. Succ. limon. rec. expreſſ. (ſaturat. ſal. abſinth. q. s.) aq. font. aa unc. ii. Sacch. alb. drach. ii. M. et divide in hauſt. iv. quorum capt. unum mane & veſpere.

℞. Succ. limon. rec. expreſſ. unc. ii. Sal abſinth. drach. i. Aq. font. aq. cin. ten. aa unc. iii. Sacch. alb. ſemunc. ft. miſt. cap. cochl. ii. tertiis horis.

Appl. hypogaſtrio emplaſt. veſicat. & mitt. ſang. e brach. ad unc. viii.

The blood was covered with an inflammatory cruſt, and a ſecond bleeding was ordered, which was omitted. She had ſtools from the draught; but the diſcharge from the uterus was ſmall and putrid, and ſhe had almoſt a perpetual vomiting of a black matter. Her pulſe was

 immenſely

immenſely quick; no ſleep, but her pain a little eaſier, after ſhe was bled, and the bliſter applied. Flannels wet in warm infuſions of chamomile were ordered to be applied to the abdomen.

She died on the next evening (that is, on the 4th day of the diſeaſe), and her body being opened, the uterus appeared contracted to the ſize of a ſmall round flaſk, which would contain a pint. It was covered over with a purulent membrane, in the manner all inflamed parts are, and there was a moſt remarkable redneſs about the fundus uteri, and the ovaria. The internal ſurface appeared to be rotten; on each ſide of the uterus about two or three ſpoonfuls of very thick pus, and a great quantity of ſerum, were found. The whole colon, and the epiploon ſeemed much inflamed. The inflation of the colon had cauſed the tumefaction of the abdomen. But it was ſufficiently evident, that an original inflammation of the uterus had brought on the irritation and inflammation of the more ſenſible inteſtines.

The following method was uſed at Kidderminſter with conſiderable ſucceſs, by my father, when

when the puerperal fever was epidemic there, in the year 1777.

If the pains were very ſevere, and the patient had not been previouſly blooded, he ordered her to be bled once. If there was any vomiting of bilious or black matter, he generally recommended that the ſtomach ſhould be waſhed with warm water, or chamomile tea; and when the vomiting continued in ſuch a degree as to require any thing of the anti-emetic nature, he ordered the mixture of Riverius in the ſtate of efferveſcence. But when none of theſe circumſtances intervened, he immediately ordered the patient to take an ounce or two of the oleum ricini, mixed with an equal quantity of weak rum or brandy and water, which he has experienced to be the beſt vehicle of this medicine. After this, the following emulſion was ordered: —℞. Emulſ. com. lb. i. mannæ unc. ii. ſal nitri drach. i. ft. emulſio. Cap. cochl. iii. om. hor.

At the ſame time a glyſter was ordered to be injected two or three times a-day, as circumſtances required, conſiſting of three parts of a pint of warm water, and an ounce and a half of ſaccharum culinare; and this ſimple injection, without the addition of oil or other purgative in-

 gredients,

gredients, was found more effectual for the purpose of encouraging diarrhœa in this disease, than when such ingredients were added. By this method, a considerable diarrhœa was for the most part excited, and the pains about the uterus, and the fever, generally visibly abated in twenty-four hours; by supporting such a diarrhœa by the occasional repetition of the oleum ricini, as well as by a repetition of the emulsion and the glyster, or occasional doses of the following medicines:

℞. Tamarind. mannæ aa uncias duas, coque ex aq. hord. lb. i. ss. ad lb. i. colaturæ adde tart. solub. unc. i. sacch. alb. unc. ss. Tart. emet. gr. iii. ft. aposem aperiens cap. cochl. iii. bis vel ter in die pro re nata.

℞. Pulv. rhei opt. drach. ss. Succ. limon. rec. express. (satur. sal. absinth. q. s.) unc. ss. Aq. hord. unc. i. Sacch. alb. drach. i. ft. haust. pro re nata sumend.

A profuse diarrhœa excited by these means, at the beginning of the disease, hardly ever failed to give an immediate check to it, and to abate the pain, its most formidable symptom, in a remarkable manner. But, in many cases, it will be necessary to keep up this diarrhœa for some

fome time, in fuch a manner as the pain and other fymptoms of the difeafe require, and the ftrength will bear, while any degree of tumefaction in the abdomen, or fulnefs in the belly, or pain, or fever remains. The lochia, for the moft part, return as the fever abates; and a very extraordinary fœtor attending the return of this difcharge, points out the nature of that fomes which undoubtedly acts as a confiderable incentive of this difeafe; and if the milk had been ftopt or prevented by the fever, it foon returns upon its abatement, as will alfo the lochia. The air of the room was kept temperate and frefh by a door being conftantly open, and a cafement occafionally opened to admit it. The room was alfo fwept clean, and frequently fprinkled with vinegar and water. The patient was ordered to drink barley-water, water-gruel, and thin panada; fometimes a little fmall wine-whey was allowed; but in general it was very fparingly employed. Spirituous liquors were abfolutely forbid, as well as broths, and every fpecies of animal food. The linen and fheets of the patient were changed fo as to keep them clean and pure.

Under

Under this management the patient's recovery was for the moſt part greatly advanced by the fifth day; and hardly any fever remained by the ſeventh. If it continued after this time, the patient was ſometimes ſeized with pleuritic ſtitches and cough, the inflammation having changed its place from the parts about the uterus to thoſe about the breaſt, which required a treatment ſimilar to the pleuriſy, by bleeding and the antiphlogiſtic method. In other inſtances, where the fever did not ceaſe by the ſeventh or ninth day, it became perfectly putrid. In ſuch a caſe, a moderate diarrhœa was ſupported, wine more freely added to the patient's drink, and the bark and other antiſeptics adminiſtered.

IV.

Caſe of the ſucceſsful Treatment of Hydrocephalus Internus, by Mercury. By Mr John Mackie, Surgeon in Huntingdon.

JOHN ALGOOD, aged twenty-ſeven, of a thin habit of body, accuſtomed for four or five years paſt to work in a tan-yard in a very ſtooping poſture, was attacked in the beginning of May

May with an irregular intermitting fever, accompanied with much pain in his joints. Thefe complaints continued till about the middle of June, when he was feized with a violent and conftant pain in the back part of his head, attended with great giddinefs, noife in his head and ears, dimnefs of fight, *&c.* and his fever became more continued. He lay in this ftate upwards of a month, without receiving any benefit from fome medicines which he took during this period.

I was called to him in the middle of July, and found him labouring under the following fymptoms: A fixed pain on the right fide and back part of his head, which was frequently fo acute as to make him quite outrageous, crying out, tearing his hair, beating himfelf on the head, *&c.* He had fuch a giddinefs, that, unlefs ftrongly held, he could not fupport himfelf a moment in an upright pofture. He could not bear the light, and when he did venture to open his eyes, could not fee objects diftinctly. His pupils were uncommonly dilated, and his right eye feemed drawn outward, and rather contracted in its volume. He complained of a ftrange palpitating noife in his head and ears, and faid, he felt at times

times as if there was a weight of water falling from one ſide of his head to the other. He was, in general, ſenſible; but on aſking him two or three queſtions together, he became confuſed, and, like a perſon with an oppreſſed brain, anſwered, with heſitation, quite wide of the queſtion, and often oppoſite to what he meant. Along with theſe, he had a hot ſkin, a ſmall quick pulſe, thirſt, a foul tongue, urine in ſmall quantity and high coloured; he was emaciated, ſick, coſtive, and ſweated much; had often a kind of ſtupor, but very little ſleep. Once in the twenty-four hours, he had generally a remiſſion (of three or four hours continuance) of the febrile ſymptoms, but of none of the other complaints.

What follows are the notes I kept of the progreſs of the diſeaſe, and its treatment.

July 16th. Ordered three or four leeches to be applied to each temple immediately; an emetic to be taken in the evening, and a cooling purge to-morrow morning.

17th. Called in the evening, and found the leeches had taken away a good deal of blood, and the vomit and purge operated well. No change in the complaints, except that the ſickneſs

nefs is a little abated. He fcreamed greatly on attempting to raife his head from the pillow.

Ordered his head to be fhaved, and a fharp blifter to be applied all over the occiput, large enough to cover the nape of the neck; alfo, one on the infide of each leg. Internally,— ℞. Nitri puri, dr. fs. Gum. camphor. gr. iv. M. f. pulvis; quarta quaque hora fumendus durante febrili calore. ℞. Pulv. cort. Peruvian. dr. i. Pulv. rad. Valerian. fylv. dr. fs. M. f. pulvis, exhibendus quamprimum remiffio appareat, & repetendus, fi ultra horas tres pergat. Thin milk-gruel and barley-water for drink.

July 19th. The blifters have difcharged much, and he has taken the medicines punctually; but the fever and other complaints remain as before. Pulfe very irregular; pain in the head, and reftleffnefs, extreme.

Left off the camphire, and in its ftead added to each nitrous powder, one-fourth grain of tartar emetic. Dreffed the blifters with the unguent. ad veficatoria.

21ft. Two dofes of the bark and valerian were given during the two laft remiffions of the fever, which were full four hours each; but today there appears no kind of amendment. All the

the ſymptoms continue much the ſame. Shriek-ed out much, and talked incoherently, when I ſaw him. Has had no ſtool ſince he took his phyſic. Ordered a laxative glyſter to be thrown up directly, and the medicines to be continued as on the 19th.

23d. The glyſter procured two motions. Has ſweated profuſely through the laſt 48 hours. Bliſters have run freely. The two laſt diurnal remiſſions not quite ſo diſtinct. No abatement of the other complaints. The pain, giddineſs, ſtupor, contortion of the eyes, *&c.* remain in as great a degree as when I firſt ſaw him. At this time, the long continuance of the diſeaſe, its hitherto having reſiſted every ordinary remedy, together with the ſtill formidable appearance of the ſymptoms, made me almoſt deſpair of my patient; but having juſt ſeen the Caſes publiſh-ed by Dr Percival and Dr Dobſon, in which a ſet of ſimilar ſymptoms were ſo ſucceſsfully treat-ed by mercury, I now began to think this a fa-vourable opportunity for giving it a trial; there-fore, I left off all other medicines, and ordered ten grains of calomel, made into a bolus with conſerve of roſes, to be taken at bed-time: At the ſame time, a dram of the ſtrong mercurial ointment

ointment was directed to be rubbed into the ancles; and both to be repeated every night.

25th. Found no alteration. Fever and other ſymptoms the ſame. Bliſters heal, having been dreſſed theſe two days with baſilicon. I ordered the calomel and mercurial friction to be continued as on the 23d.

July 26th. I was ſent for to him to-day, and found him complaining much of being griped. Had two purging ſtools in the laſt 24 hours. His gums were a little tender, and his breath beginning to be tainted. In other reſpects, as uſual. Left off the calomel, and ordered a double quantity of the mercurial ointment to be rubbed into his thighs every night.

28th. I ſaw every face about my patient pleaſed. They told me, he had had a calmer night than any theſe two months paſt. For the firſt time, he ſaid the pain of his head was abated; he looked more compoſed; his ſkin felt cooler; his pulſe more full, and not ſo quick. He complained of his mouth being ſore, and his tongue ſwelled; and had diſcharged a good deal of ſaliva in the night.

I ordered only one dram of the ointment to be rubbed in, for the two next nights.

30th.

30th. He ſpit about three quarts during the laſt 48 hours, and complains of much heat in his mouth; but to my great ſatisfaction, I found all his other complaints better. Pain in his head almoſt gone, excepting now and then a ſhoot. Giddineſs much abated. He ſaid he often felt a trickling kind of motion, as of water running along the inſide of the temples; but this ſenſation was without pain. He could ſit up in bed and feed himſelf; was ſenſible and in ſpirits. Pulſe regular, and not above 70 in a minute. He has had a remiſſion of upwards of ſix hours to-day; ordered the ointment to be left off.

Aug. 1. Continues to ſpit freely. Had yeſterday a ſmart return of the fever, which however only held him about 12 hours. To-day there is a perfect remiſſion, and he is in every reſpect greatly mended. Has had ſome hours good ſleep. Complains very little of pain. Got out of bed for the firſt time; ſat up three hours; and could even bear the light without being diſturbed by it. Complained of being hungry.

Allowed plenty of milk-porridge and ſmall broth.

3d. The ſpitting keeps up to about a quart in the 24 hours. Found him out of bed to-day, and

and almoſt without complaints. He told me, his head was well, and that he only wanted ſtrength, and to get rid of his fever and ſore mouth. The remiſſions were now almoſt as long as the paroxyſms, being about 12 hours each. Has taken no medicine internally ſince he left off the calomel; and was coſtive.

I ordered him a doſe of rhubarb; and, after its operation, a dram of the bark every four hours during the remiſſions.

Aug. 6. The ſpitting begins to decline. He has had no fever for the laſt twenty-four hours. He ſleeps well, and has an appetite, if the ſoreneſs of his mouth would let him eat. Head-ach and giddineſs gone; but his pupils ſtill continue much dilated.

Ordered him another rhubarb-purge, and the bark to be continued every ſix hours.

9th. Has had no fever, or other complaints. Spitting inconſiderable; mouth better; aſpect more natural; is able to walk about, and mends daily. I now allowed him a more generous and ſubſtantial diet, and continued the bark twice a-day for another week.

From this time, he continued to get ſtrength apace; had good nights; good appetite; a per-

fect freedom from headach and fever; and, on the 23d, went to work, being in every respect quite well, and has continued so ever since.

This patient did not seem to receive the smallest benefit from the blisters, or any thing else, till he took the mercury, which acted like a specific; and the fever seemed to be altogether symptomatic, as it easily yielded after the other complaints were removed.

V.

Observations on the Benefit derived from the Use of the Cuprum Ammoniacum, in a spasmodic Affection of the abdominal Viscera, and in Hysteria. By Dr John Storer, *Physician in* Grantham.

THOUGH I cannot subscribe to the opinion of those who seem to believe, that cases of a singular nature, and such only as rarely occur in medical practice, are entitled to the attention of the public; yet, when an affection of this description occurs; when it bids defiance to every mode of treatment which a due attention to the nature of the symptoms is likely to suggest; when, in the end, it yields to a medicine whose

whofe powers are but little known; the benefit arifing to mankind, from communicating the refult of fuch experience, is evident. No fingle cafe, it is true, can amount to a proof of any thing; but it is to a collection of fuch hiftories, that we are indebted for the introduction of the moft valuable articles in the Materia Medica; and it is by thefe means alone, that we are enabled to afcertain the true nature and extent of their powers, and affign them their proper places in that clafs of medicines to which they belong.

The following cafe, in itfelf but little interefting, is related chiefly with a view to corroborate a late teftimony in favour of a medicine whofe virtues feem confiderable, though hitherto not generally attended to.

Mrs ——, a middle aged married woman, of a delicate habit, having formerly caught cold in child-bed, and being likewife under the influence of conftant uneafinefs of mind from domeftic caufes, became fubject, for fome years paft, to a general tremor, extreme terror from trifling caufes, and other fymptoms indicative of great irritability, and irregular action in the nervous fyftem.

In May laſt, without any external cauſe, ſhe was firſt ſeized with the paroxyſms which ſhall be deſcribed, and which continued to gain ground both in violence and frequency, in ſpite of every method that was thought of for their relief.

I ſaw her firſt on the 28th of July, and was preſent ſoon after during one of the fits. She complained firſt of a palpitation of the heart, and a dull pain, attended with a ſenſe of weight and oppreſſion at the præcordia; ſoon after, ſhe was ſeized with violent and repeated retchings, during which there was a trifling diſcharge by vomiting, chiefly conſiſting of the juices of the ſtomach; from this, the affection ſeemed to paſs downwards, occaſioning an uncommon heaving of the abdominal parts, and at the ſame time a feel, as if the bowels were twiſted together in the moſt extraordinary manner; this ſymptom gave way in its turn, and was preſently ſucceeded by a quick, confined, and irregular reſpiration, accompanied by a hoarſe croaking noiſe in the throat, and a large diſcharge of froth from the mouth or noſe; in a few minutes more, ſhe began to recover. Though ſhe was able to give little or no account of her feelings during the latter

latter part of the paroxyſm, yet I am convinced there was no total abolition of the ſenſes at any point of time; nor were there any convulſions of the external parts, except ſlight twitchings in the face, and retractions of the eyes. The duration of the paroxyſm was from 30 to 40 minutes, and of late they had recurred ſometimes twice in twenty-four hours; but always at irregular periods.

Such was the violence of the attack, that it left behind it extreme debility, wildneſs in the eyes, an univerſal tremor, a conſtant tearing cough, and an almoſt total loſs of voice; ſo that it was with difficulty I could gueſs at her meaning, when ſhe wiſhed to give me information with regard to her complaints. The pulſe, which in the paroxyſm was ſo weak and fluttering as to elude the finger, was irregular during the interval, and varied from 90 to 105 in the minute; the ſkin was hotter than natural; the tongue moiſt, but extremely foul; the ſtate of the bowels was uncertain; coſtiveneſs, for a few days, was for the moſt part ſucceeded by frequent griping ſtools, but without producing any change in the diſeaſe; the urine was natu-

ral, and the catamenia had flowed regularly ſince the beginning of the complaint.

When I ſaw her firſt, the continuance of the diſeaſe for ten weeks had reduced her ſo much, that it was with difficulty ſhe moved from one room to another. Her appetite was gone; her complexion ſallow, and ſhe had ſuffered conſiderable loſs of fleſh.

In reflecting upon the nature of this complaint, I found myſelf unable to account for the ſymptoms upon any other ſuppoſition than that of a convulſive affection of the internal parts, which beginning with the heart itſelf, attacked ſucceſſively the ſtomach, inteſtines, diaphragm, gullet and trachea.

I could readily diſcover ſeveral circumſtances in the habit, which might diſpoſe to ſuch a complaint, but it was neceſſary to look farther; and I was of opinion, that ſome irritating cauſe lurking in the primæ viæ, might be what gave immediate occaſion to it. To this idea I was led by a conſtant ſenſe of weight and oppreſſion at the pit of the ſtomach, which ſometimes roſe to acute pain, frequent retchings to vomit, and gripings in the bowels.

My

My firſt attempts, therefore, in the treatment of this caſe, were directed towards diſcharging or correcting this ſuppoſed exciting cauſe; and by ſome means to induce a different mode of action in the parts concerned.

Emetics were accordingly preſcribed, and their firſt effects gave encouragement to repeat them. Their operation both ways, never failed to procure conſiderable relief from pain and oppreſſion at ſtomach; but the ſtate of the paroxyſms was in no reſpect altered.

Antiſpaſmodics were next had recourſe to; among which, opium, caſtor, camphire, aſſafetida, gum ammoniac, valerian, and the volatile alkali, were ſucceſſively employed, in ſuch doſes and forms as ſeemed beſt to ſuit the circumſtances of the caſe, and that for three weeks together, without the ſmalleſt advancement towards a cure; the region of the ſtomach was bliſtered; the warm bath was recommended without effect. That tonics might not be left untried, the extract of gentian was combined with the gums to no better purpoſe. What ſeemed to afford moſt relief was a medicine conſiſting of tinct. guaiac. v. tinct. theb. and vin. ipecac. This taken at bed-time, ſeldom failed

to procure a comfortable night, with a ſoft perſpirable ſkin; but the fits returned with undiminiſhed violence next day. My patient began now to deſpair of relief; and whatever expectations might have been formed from the bark in diminiſhing the general irritability of the syſtem, I was convinced the delicate ſtate of the ſtomach would not admit of its being taken in quantities ſufficient to produce that effect. I was therefore reduced to my laſt ſhifts, when the *cuprum ammoniacum* occurred to me as a medicine which deſerved a trial in ſuch a caſe: A hiſtory, now publiſhed by Dr Duncan, where its good effects had been ſufficiently proved in a caſe of genuine epilepſy, had been related to me very circumſtantially ſome years ago; and I had myſelf ſeen it of uſe in a convulſive caſe more lately.

As my patient could not now ſwallow a pill, owing to the ſevere affection of the throat in the fits, I directed one-fourth grain of the cuprum ammoniacum to be rubbed into a powder, with a few grains of magneſia, and given morning and evening. Though ſhe ſuffered much from the nauſea, occaſioned by ſo ſmall a doſe, and what was worſe, vomited it up regularly for the firſt

first week, she persisted resolutely in its use; the nausea at length ceased, the medicine was retained, and its salutary effects were quickly observable in a diminution of the fits, and an abatement of every troublesome symptom; the dose was soon increased to half a grain, and afterwards to a whole grain, twice a-day.

From this time, there was an evident and daily amendment; the paroxysms became both less violent and frequent; the pain and uneasiness at stomach yielded; the appetite began to return, with every symptom of convalescence. Since she began the use of the cuprum ammoniacum, no other medicine whatever has been prescribed to her; and she still continues to take the powders at intervals. She has now recovered her usual looks and strength, and has not experienced the smallest return of the fits since the beginning of September last, nor any other complaint, except that general tremor to which she has been subject for years.

As but very few cases are hitherto recorded with a view to ascertain the powers of the medicine in question, I have thought it necessary to state this case with a minute exactness, and a scrupulous attention to facts.

The

The conclusions to be drawn from it are simple, and will readily occur to those who peruse it. With regard to its mode of operation, I have hitherto considered the cuprum ammoniacum as a powerful tonic. Whether it exerts other, and peculiar effects, on the nervous system, in cases of convulsive affections, must be left to the decision of future experience.

In the light of a tonic alone, I will venture to pronounce it a valuable acquisition to the Materia Medica, in a thousand instances, where, from the caprice of the patient, or the extreme delicacy of the stomach, no other medicine of that class can be exhibited in such quantity as to give it effect.

The case to which I alluded, as having recommended the cuprum ammoniacum to my attention in convulsive cases, is that of a young lady, who, for many years past, has been subject to the most violent hysterical fits I ever was witness to.

After complaining for some days of an oppressive headach, universal soreness of the muscles, total want of appetite, and a dry husky cough, she was suddenly seized with convulsions as violent and various in their mode of attack, as hysterical

ſterical paroxyſms uſually are. What rendered them peculiarly dreadful, was their continuing from four to five weeks together, during which period ſhe was conſtantly confined to bed, and, as I am aſſured, never had an interval of more than three hours.

For five years theſe attacks had been in uſe to return every three or four months at moſt, and had not been leſſened by a variety of methods recommended by ſome of the moſt eminent of the Faculty.

In May 1778, immediately after recovering from a violent and tedious attack, ſhe began the uſe of the cuprum ammoniacum, and perſiſted in it for two months. Since that time, though the irregularity of the menſes (the only evident cauſe of the fits) continues in the ſame degree as before, yet the paroxyſms have not returned more than twice a-year, nor exceeded ten days in their duration. Thus, though the exciting cauſe is not removed, that diſpoſition in the habit which favoured the diſeaſe ſeems to be much diminiſhed.

To render this caſe more concluſive, I am ſtill in hopes to prevail on my patient, who has a great averſion to medicines, to give the cuprum

ammoniacum

ammoniacum a more complete trial. I have not myſelf met with an opportunity of giving the cuprum ammoniacum in any caſe of genuine epilepſy. Since writing the above, however, I have received a letter from Mr Bland, a ſurgeon of eminence at Newark, to whom I recommended this medicine. An extract from it will make a proper appendix to this caſe.

To what I have ſaid, it may not be improper to add, that cuprum ammoniacum prepared with all imaginable care, when expoſed for ſome time in the air, loſes its own beautiful deep blue colour, and aſſumes the appearance of that precipitate which is depoſited upon the firſt addition of volatile alkali to a ſolution of blue vitriol. Here there is evidently a decompoſition, whether from a diſſipation of that portion of the volatile alkali which was combined with the metal, or from the attraction of acid from the air, is a matter of little importance to the practitioner. This obſervation, however, has induced me to lay aſide the pilul. cærul. of the laſt edition of the Edinburgh Pharmacopœia, and to exhibit the cuprum ammoniacum either in a bolus, or rubbed into a powder with a few grains of magneſia, and wrapt in an oiled paper.

VI.

VI.

An Account of the Effects of the Cuprum Ammoniacum in the Cure of Epilepsy, in a Letter from Mr Thomas Bland, *Surgeon at* Newark, *to* Dr Storer *of* Grantham, *communicated to* Dr Duncan.

I Am happy in having it in my power to ſend you the following caſe, and you are welcome to make what uſe of it you think proper.

Ann Collinwood, a fine, florid, healthy woman of twenty-two years of age, being a principal witneſs againſt a man for a robbery, was, by the magiſtrates of this place, for want of bail, committed to priſon, which had ſuch an effect upon her as to occaſion the return of epileptic fits, which, when a child of ſeven or eight years old, ſhe had been ſubject to, but not ſince, till this period January 4. 1779, when I firſt ſaw her. I had her immediately removed from confinement, placed in humane hands, and had proper nurſes provided for her. I preſume it will be needleſs to enumerate every particular ſymptom; ſuffice it to ſay, that the fits were violent and numerous, not leſs than twenty in the courſe of a

a day, and so little notice had she of their approach, that (though well attended) she was much bruised by falling, *&c.*

Having already seen the good effects of zinc in an epileptic patient attended with extraordinary circumstances, I therefore ordered that medicine for her, which she regularly continued about three weeks, from the above date, without any material effect; opium, camphire, bark, and valerian, with other nervous and antispasmodic medicines, were administered, and with no better success. Thus disagreeably circumstanced, I had recourse to the cuprum ammoniacum which you favoured me with, though I must confess with little hopes of advantage, the violence of the fits, the peculiar situation and state of mind of my patient, considered; however I was agreeably disappointed: The first dose was taken about the 20th of January, and from that time the fits became *daily* less and less till the middle of March following, when she left off her medicine, and was sent to her friends perfectly well.

VII.

Experiments and Obſervations on the Uſe of Bell-Metal Mortars in the Shops of Apothecaries. By —— ——— of London, *communicated to* Dr Duncan.

PHYSICIANS have long been acquainted with the poiſonous quality of copper; and have of late years wiſely condemned the uſe of copper veſſels in culinary preparations. Is it not then ſurpriſing, that although they have ſo well underſtood the pernicious effects of this metal, and have provided againſt it in the department of the cook, they ſhould yet ſuffer apothecaries ſhops, and chymical elaboratories, to abound with copper and bell-metal utenſils?

Bell-metal may be properly ranked with copper with reſpect to its conſequences in the body; for the proportion of this metal in its compoſition is, I am credibly informed, as two to three. It appears from the following experiments, that bell-metal is ſoluble in nearly the ſame *menſtrua* with copper. The arguments, therefore, applicable to the danger of the one, muſt hold good in regard to the other.

NUMBER

Number I.

Five grains of the raſpings of a common bell-metal mortar, made very clean, were put to half an ounce of river water, with half a dram of marine ſalt. Five grains of the raſpings of a half-penny, made alſo very clean, were added to the ſame quantity of the like mixture.

Number II.

Five grains of the raſpings of bell-metal were added to half an ounce of diſtilled vinegar; five grains of a half-penny were put to an equal quantity of the ſame fluid.

Number III.

Five grains of the raſpings of the metals were put to half an ounce of common vinegar.

Number IV.

Five grains of raſpings of each metal were put to the following mixture, ox-gall dr. ſſ. olive-oil dr. i. water dr. iij; miſc.

The phials containing the above were examined after a few days, and appearances were as follows:

No. 1. Was as blue as the aqua ſapphirina of the ſhops diluted with about an equal part of water, and the two phials were as equally ſo as the eye could determine.

No. 2. Was ſtrongly, and about equally tinted between a blue and green, but not ſo deeply as No. 1.

No. 3. Had a greeniſh tint; but that with copper was ſtronger than the one with bell-metal.

No. 4. Were green, but whether from metal or gall, I cannot tell; however, that with copper was much deeper than the one with bell-metal, particularly the ſupernatant oil.

The danger that may reſult from the general uſe of copper veſſels, in preparations of the kitchen, is not, in my opinion, comparable to that which is to be dreaded from their uſe in thoſe of the chemiſt or apothecary; ſince, in the firſt caſe, excepting ſalt and vinegar, few articles of a very corroding nature are ſubject to the treatment of the cook; whereas, to the apothecary belongs the management of materials of every kind. Beſides, a perſon in health is leſs liable to feel the effects of what is baneful than a valetudinarian, whoſe organs are weak, and readily thrown into

 diſorder.

diſorder. The following accident gave riſe to theſe reflections.

Some *coralium rubrum* was powdered in a bell-metal mortar, ſifted, and levigated, after the manner of treating ſuch like articles of the *Materia Medica*. The operator then proceeded to the waſhing of it, as it is termed, *i. e.* the ſeparation of the fine from the coarſe by ablutions with water. In the courſe of this proceſs, he taſted the coral, to diſcover its degree of tenuity, and he thought he found a ſavour of copper; but the exiſtence of this metal in the maſs was preſently confirmed to him, by the appearance of ſome particles of it among the coarſe coral remaining in the veſſel, which, upon its detachment from the coral, proved to be pretty conſiderable in quantity.

Leſt it ſhould be alleged that the mortar wherein the coral was powdered was of a peculiar conſiſtence, it may be proper to remark, that upon the faireſt compariſon, it appeared to be of the like texture with other bell-metal mortars.

From theſe circumſtances, may we not juſtly apprehend, that many of the triturated preparations of the ſhops are impregnated with copper? But we will conſider other alarming facts, that may

may probably prove this ſuſpicion to be too well founded.

In order to determine whether particles of metal had been rubbed from the mortar in powdering the coral, the following Experiments were inſtituted.

EXPERIMENT I.

The particles ſeparated from the coral appearing like copper, and weighing about four or five grains, were put to two drams of ſpirit of ſal ammoniac; a high ſapphirine colour preſently took place, which increaſed in depth till the particles were entirely diſſolved.

EXPERIMENT II.

A few grains of the raſpings of the mortar were put to two drams of ſpirit of ſal ammoniac; a ſapphirine colour, as in the preceding Experiment, was ſoon produced.

EXPERIMENT III.

A few grains of verdegris were added to two drams of ſpirit of ſal ammoniac; a fine blue colour was directly obtained, ſimilar to that in the former Experiment.

Theſe Experiments, I think, amount to a ſufficient proof of the exiſtence of copper among the coral.

If particles as large as grains of ſand were depoſited with the ocarſe coral, as was really the caſe, we may conclude that much ſmaller ones, not perhaps diſcoverable by the naked eye, did remain ſuſpended with the fine; for extenſion of the ſurfaces of bodies, will enable them to ſwim in fluids ſpecifically lighter than themſelves.

EXPERIMENT IV.

One dram of the finely prepared coral, with two of the ſpirit of ſal ammoniac, preſently exhibited a blue appearance; which, though not by much ſo deep as the ſolution Experiment I. was yet as high as any aq. ſapphirina I ever ſaw.

Theſe Experiments were ſo ſatisfactory to the apothecary under whoſe inſpection they were made, that he immediately ordered iron mortars to be procured, in place of thoſe of bell-metal, now proved to be dangerous.

I took one dram of prepared coral, and it excited a ſlight degree of nauſea. But it muſt be remembered, that the Phyſician preſcribes for the ſick, and not for the hale and ſtrong. And is it not an alarming conſideration, that what is intended as a pacific remedy, may perhaps prove an auxiliary to the diſeaſe, already probably hard to be ſuſtained? This, it is to be feared, muſt

muſt be the caſe, when coral, or other abſorbents that have undergone trituration in bell-metal mortars, are given in diarrhœas, or to check violent vomiting. The cuprous impregnation which theſe powders thus prepared may have acquired, cannot but prove a moſt dangerous ſtimulus to the ſtomach and inteſtines, in an inflamed, tender, or abraded ſtate.

But if the evil before us be not general, concluſions of a general nature will be abſurd; the univerſality of it then is next to be conſidered. But no one will deny the univerſal uſe of bell-metal mortars. The inquiry therefore reſts, Whether the mortars of others are equally ſuſceptible of abraſion with that in the above inſtance?

I got ſamples of prepared coral from ſeveral of the moſt eminent apothecaries in London; ſome afforded a bluiſh tincture in the volatile alkali, and ſome a yellow, like a diluted tincture of gamboge. Some crabs claws gave the ſame kind of yellow tincture, other crabs claws imparted a greeniſh tincture. Powder of hartſhorn, which I procured from different apothecaries, afforded a light blue tincture in ſpirit of ſal ammoniac.

If we admit the inferences from the firſt and ſecond Experiments, we are naturally led to conclude, that the blue colour in the ſubſequent ones was derived from copper: What occaſioned the yellow tinge from ſome of the coral, I cannot ſay; but this I muſt obſerve, that the coral which gave it had not the marks of being genuine. The green in the *chelæ cancrorum*, was but little remote from the blue in the other Experiments.

I have diſcovered, that the adhering membranes in crabs claws give a yellow tincture.

After what has appeared, it cannot be doubted that bell-metal mortars are liable to be abraded by hard ſubſtances powdered in them. If, however, any one ſhould diſpute the fact, let him rub ſome powder of burnt hartſhorn, coral, or crabs claws in a bell-metal mortar, and afterwards try it by a proper criterion (the beſt, I think, is the volatile alkali), and he muſt certainly admit the truth of what has been ſaid.

If the above facts, and the inferences from them, ſhould be admitted, the neceſſity of an immediate regulation in the cheſts of army and navy-ſurgeons will appear in a very ſtriking light: For army and navy medicine-cheſts are

conſtantly

conſtantly ſupplied with bell-metal mortars, and no other of metal.

But it is highly probable, that what I have advanced may be ridiculed by many, as containing only what is common and generally underſtood. The importance of the obſervations which have been made, none ſurely will deny: Their being well known, then, implies a ſhameful ſupineneſs in thoſe whoſe buſineſs it is to inquire into theſe matters, ſince the evil is not corrected.

To determine whether a blue colour would ſucceed, on digeſting the unpulverized ingredients in the volatile alkali, I put ſome coral, crabs claws, *&c.* broken in pieces, into ſpirit of ſal ammoniac, and, after ſuffering them to digeſt many days, I examined the ſpirit, and found it limpid and colourleſs, excepting a yellowiſh caſt in that with the crabs claws, which was undoubtedly from the adherent membrane, as already hinted.

It is difficult to diſcover copper, though it ſhould exiſt, in many drugs, on account of the colour they themſelves impart to *menſtrua*, by which the teſt is obſcured; but analogical reaſoning teaches us, that all hard ſubſtances are

liable, through attrition, to abrade bell-metal; whereby they will become loaded with metallic particles. Admit, however, the *possibility* of this effect taking place, is it not a distressing reflection, that we may *possibly* be giving poison, while we rest secure in the administration of medicines in themselves harmless?

I have hitherto considered bell-metal mortars as subject to *abrasion* only; but they may impart a poisonous quality to medicines on the principle of *corrosion;* thus, for instance, if you rub powder of burnt hartshorn ever so little, or indeed let it lie some time in a bell-metal mortar, an obvious blackness will succeed, especially if it be moistened with any liquor.

It is possible that the ecphractic, the soap-pills, or any alkaline or acid preparation, may be beat up in bell-metal mortars, as these only are in general use, and at hand on all occasions. I will not here make a comment: Let candour acknowledge, let humanity express what must be the consequence of such procedure. Suffer not, then, such dangerous instruments to be seen in shops that should be the repositories of friendly medicines, prepared with conscientious care.

I

I ſhall mention, with deference, a ſuggeſtion that aroſe on conſidering the effects of ſome preparations of copper, and on reflecting that crabs claws have been eſteemed diuretic. I think then, that the teſtaceous powders have had a property aſſigned to them, which, if they poſſeſs at all, they derive from the mortars in which they are powdered.

It is notorious, that cuprous preparations, in proper doſes, promote the urinary ſecretion, and hence a famous receipt of *Boerhaave;* but I fancy it will be difficult to aſcertain any remarkable virtue of this kind in crabs claws. Their alkaleſcency will hardly be thought ſufficient to account for any ſuch property, ſince chalk is endowed with a much greater ſhare of this quality, yet is not reputed diuretic.

Having then, upon facts, exploded braſs and bell-metal, it will be required, What other kind of mortars will anſwer the purpoſes of apothecaries and chemiſts? The reply is ready; IRON. The experience of ſeveral gentlemen has proved, that mortars of this metal anſwer perfectly well. It may be objected, that iron is apt to contract ruſt. But let me obſerve, that an attention to the foulneſs of bell-metal and braſs, is much more

neceſſary

neceſſary than to that of iron, as a neglect in the one caſe would be exceſſively dangerous, in the other hardly more than an inelegant omiſſion. But caſt iron is really leſs ſuſceptible of the impreſſions of the air than bell-metal. Indeed, in all reſpects, it has the advantage over it, and is beyond compariſon cheaper.

Iron then, a perfectly innocent metal, muſt be the ſubſtitute to one of allowed virulence. And what ſolid objection can prevent the regulation from immediately taking place? The uneaſineſs that ever attends an uncertain practice, muſt be a powerful incentive to apothecaries to adopt it. The ſatisfaction that muſt accrue from being aſſuredly on the ſafe ſide, would, of itſelf, to feeling minds, be a ſufficient reward; and the ſociety of apothecaries have, I doubt not, too much honour and honeſty, to wiſh to continue a practice ſtamped with uncertainty and danger.

VIII.

A successful Method of Cure proposed by Mr Daniel Orred, *Surgeon in Chester, in Diseases of the Larger Joints, which have hitherto been thought to require Amputation: Communicated to* Dr Duncan *by* Dr Percival *of Manchester.*

THERE are few practitioners in surgery, I presume, who have not perused Mr Pott's very sensible little Tract, on the propriety and necessity of amputation in certain circumstances, and will not acknowledge, with him, that diseased joints, from scrophulous and other causes, are generally incurable. But in this paper I hope to evince, that some very bad cases of this sort are remediable by human art, even when they have been of long continuance; and that their cure may be accomplished by producing an absorption of the stagnant and superabundant synovia, and by drying the enlarged ends of the bones, before the ligaments and cartilages have been too much injured. It is obvious, however, that these means will be most effectual in the earlier stages of the disease; for though children are sometimes cured

red by the fole efforts of nature, even after the commencement of fuppuration, yet when this occurs in adults, as it fometimes does very rapidly, the lofs of the limb muft be deemed unavoidable. Bilguer, and fome later writers, have afferted, that tranfverfe openings may, with fafety, be made into the cavities of the larger joints, when difeafed or injured; and that the limb will thus be preferved. What furgeon has not experienced the deplorable and truly dreadful fymptoms which fuddenly arife from the flighteft penetrating wounds of joints! Several melancholy inftances have occurred, within my own knowledge, of the fatal termination of fuch tranfverfe incifions, in patients who would not fubmit to amputation. One of thefe lived near two months after the joint of the knee had been laid open, and then died tabid. The wound was almoft healed, but the foot and leg remained bloated and leucophlegmatic.

The utility of bliftets, in enlargements and white fwellings of the joints, is known to every one; but the fubfequent mode of applying them, and the obfervations refulting from the practice here defcribed, will, I truft, be deemed original.

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In the ſpring of the year 1775, I was deſired to viſit Miſs Lightfoot of Hoole, two miles from Cheſter. I found that ſhe had ſuffered excruciating pain during ſeveral weeks, from a white ſwelling in the knee. She was 24 years of age; of a thin habit of body; and had been afflicted with her complaint more than 20 years. On a careful examination, I found the joint of a monſtrous ſize, hard, and knotty to the touch, and with the natural inequalities quite obliterated. The ſkin was gloſſy and ſmooth; and of a pale yellowiſh hue; the leg and thigh were much waſted. From the very great internal pain, I ſuſpected the joint would ſoon corrupt; and therefore adviſed the application of a bliſter, without delay, round the whole tumor. I explained my intended mode of treatment, and honeſtly declared that it was a new experiment. Great objections were made to it by the family, notwithſtanding their conviction that the patient's life could be ſaved only by amputation, or by the means which I propoſed. My directions were at laſt reluctantly complied with, and by repeated perſuaſions were followed during three ſucceeding months. The part was every day dreſſed with a digeſtive ointment made ſtrong

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with the powder of cantharides, and a large quantity of well concocted pus, at the ſame time, cleared away. Much pain and torment were the conſequences of this courſe, although ſhe took, every night, an opiate, the doſe of which was gradually increaſed. Gentle evacuants were alſo adminiſtered at proper intervals. About two months after the firſt application of the bliſters, the knee fell ſuddenly out of joint, on raiſing the leg, which was at that time bent, and reſting upon its outſide. And I could with facility, and without giving much pain to the patient, diſlocate it either outwardly or inwardly. The joint ſeemed then to the touch ſoft and pappy. I again placed the leg on its outſide in a bent poſition, and continued the veſicatories a month longer. At the expiration of this term, the bliſter was removed; and when the inflammation was a little ſubſided, a tight bandage was applied to ſecure the joint in a proper poſition. By degrees, the parts hardened, and in a few months, ſhe was reſtored in ſome meaſure to the uſe of her leg. She wore a tight bandage near two years, which rendered the joint quite ſtiff. But afterwards, it was ſlackened a little; and on inſpecting the knee lately, I find it is not devoid of motion

motion and flexibility. It is ſmaller than the other but without any deformity.

I flatter myſelf that the happy termination of this caſe will point out in ſimilar ones a new method of cure. By the like mode of treatment, ſeldom however continued ſo long, and by the uſe of proper internal remedies, I have removed a variety of ſwellings in different joints, proceeding from ſcrophula, rheumatiſm, and other cauſes.

In thoſe white ſwellings which have been cured without the intervention of art, I have always found the affected joints not only ſtiff and immoveable, but alſo very crooked: From which it ſhould ſeem, that a large extent of connecting ligaments muſt have been corroded and deſtroyed. And when the knee has been the part affected, the patient has walked in a very imperfect, tottering manner. So that the mode of treatment above deſcribed, has advantages in point of ſafety, ſymmetry, and mobility, even over the ſpontaneous efforts of nature, when thoſe efforts terminate favourably for the patient. I hope it will not be improper juſt to mention here, that the caſe of the poor man, which I had the honour to lay before the Royal Society, and which

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is publifhed in the 69th volume of the Philofophical Tranfactions, turns out more fortunately than is reprefented in that account. The offification is become more complete, and the ufe of his arm much more perfect than it was at the time when I wrote the paper now referred to. Permit me to relate another cafe exactly fimilar, which has fince occurred in my practice. In September 1779, I was called to Guilden Sutton, a village three miles from Chefter, to vifit one Armine Jones, a ftrong healthy woman, about 25 years of age. By a fall from a horfe, upon the point of her fhoulder, fhe had fo violently bruifed and injured the joint, that fuppuration had taken place two or three months before I was confulted. I found the capfular ligament largely corroded, the joint very foul, and the ends of the bones bare, and in feveral places divefted of cartilage. The fuccefsful cure of the former cafe induced her to confent to undergo the fame operation. And the event of it in this inftance was much more fortunate than in the other; the fubject being healthier, and a larger portion of the humerus preferved, as the head of it alone was fawn off. For I believe it will always be found, that the lofs of

of ſubſtance at the end of a bone, will be ſupplied by a very imperfect oſſification.

Dr Percival *makes the following Remarks on the firſt of theſe Caſes, in his Letter to* Dr Duncan.

IN the ingenious paper, which I now tranſmit, you will find, that Mr Orred has extended the uſe of bliſters much farther than any other practitioner in thoſe ſtrumous ſwellings of the joints, which are ſo painful in their progreſs, and ſo fatal in their termination. But I fear few patients will be found of ſufficient fortitude and perſeverance to ſubmit, for ſo long a time, to the treatment which he recommends, though, in ſuch long continued and inveterate caſes, I am afraid quite neceſſary. I hope, therefore, he will exert his ſkill and attention in deviſing ſome mode of alleviating the pain, which the ſucceſſive application of ſo many veſicatories to the ſame part, appear, from his own recital, to produce. The ſtimulus of cauſtics has been abated by the combination of opium with them, without any material diminution of their activity: And it is not improbable, that the painful irritation of bliſters may be mitigated by the ſame means. The

 interpoſition

interpofition of a foft muflin rag between a vefi-catory and the fkin, almoft always prevents the ftranguary, and renders its operation in every refpect eafier, though poffibly more protracted. Might not flight electrical fhocks, paffed through the affected joint, be good auxiliaries in thofe white fwellings of which Mr Orred has treated? I have feen admirable effects from them in various glandular tumours. Nor do we know any more powerful means of removing obftructions, or promoting the abforption of ftagnant juices.

IX.

Hiftory of a Cafe of Hydrocephalus, with an Account of the Appearances on Diffection. By Robert Willan, M. D. *Communicated to* Dr Duncan.

J. B. of the Water of Leith, had, foon after birth, a vifible enlargement of his head; the futures of the cranium feparating very widely, till the fluctuation of a fluid within might be perceived diftinctly by applying the fingers. The diforder encreafing gradually, his head became at length of fuch an enormous fize, as to be out of

of all proportion to the reſt of his body, which was indeed remarkably ſmall for his age, and unable to ſupport the unweildy burden. It was therefore neceſſary to keep him always in a horizontal poſition, or carefully ſupport his head when any nouriſhment was given. Notwithſtanding this, he ſeemed ſtill to retain perfect ſenſe, and was affected by objects much in the ſame manner as other children of equal age, but never uttered any articulate words. Many Phyſicians and Surgeons had been conſulted, who all agreed in diſſuading his parents from any hopes of a cure.

About 15 weeks before his death, when I firſt ſaw him, he was ſeized with convulſive catchings in his limbs, which were removed in a few days. It ſeemed too late for a trial of mercurial unction, nor would his parents do more than keep him as eaſy as poſſible, and free from irritations. He took little ſuſtenance after this; and died, much emaciated, Feb. 17th, aged 20 months, without any particular ſymptom, only he appeared to have loſt all ſenſe ſome days before.

Dissection.

On removing the teguments, and making a perforation, betwixt three and four Engliſh quarts of thin limpid fluid were diſcharged.

This had been confined within the lateral ventricles, which were amazingly diſtended on every ſide; and had ſo compreſſed the ſubſtance of the brain, that it might be compared to a bladder, being thin, with its convolutions almoſt ſtraightened. The lining of the ventricles within ſeemed thick, and ſomewhat hard, the veſſels ſpread all over it very much enlarged.

The foramen, by which the ventricles communicate, was dilated, ſo as to admit, with eaſe, the thumb, and had a hard annular rim around it.

The plexus choroides was very dull and ſhrivelled: The corpora ſtriata greatly flattened and extenuated: The thalami nervorum opticorum, were much in the ſame ſtate, but ſtill more indiſtinct: The cerebellum, medulla oblongata, *&c.* appeared perfectly natural.

His head meaſured in circumference 2½ feet, which equalled the length of the whole body within a very few inches.

Sufficient

Sufficient time was not allowed to make further or more accurate examination.

One thing was remarkable, that his eyes were always lively and very ſenſible, the pupils readily contracting and dilating according to different degrees of light. The explanation may be perhaps not difficult.

As the diſeaſe began ſo early, the bones of the cranium, being yet tender, gave way to the effuſed fluid, whence little preſſure would fall, in the other direction, upon the origin of the optic nerves.

X.

The Hiſtory of an obſtinate Caſe of Epilepſy, ſucceſsfully treated by Blood-letting: Communicated to Dr Duncan *by* Dr Robert Hamilton *of the* 10*th Regiment of Foot.*

A Labouring man on the banks of the river Buſh, in the north of Ireland, having been long afflicted with the epilepſy; after many a long and violent ſtruggle, at length fell a ſacrifice to the ſuperior ſtrength of the foe.

His ſon, a boy of about 12 years of age, healthy and ſtrong of his years as any in the

 neighbourhood

neighbourhood where he lived, and who never had before that the leaſt ſymptoms of ſuch an affection, fell into fits. The diſeaſe daily gathered ſtrength, and in a ſhort time he became a moſt miſerable object. From a fair, ruddy, and healthful complexion, he now wore a moſt ghaſtly look, frightful and wild, and became a mere ſkeleton.

Thus his diſeaſe continued for ſome years, ſtill gathering ſtrength. Sometimes, for a whole day together, he could not be ſaid to be out of the fit; for as ſoon as he would open his eyes to the light, he would fall immediately into another.

His caſe now became deſperate; and his friends, as well as the ſympathizing neighbourhood, wiſhed only for death to relieve him from his diſtreſs, as they thought him out of the reach of medical aid. One day as he lay ſenſeleſs, and convulſed, in which condition he had continued from morning till evening, while a commiſerating crowd were gathered around, wiſhing for his end, it ſuggeſted itſelf to one of the multitude, that perhaps bleeding might be of ſome uſe; that however improbable the ſucceſs might appear, yet it was a duty to attempt ſomething for his relief.

Bleeding

Bleeding is, among the common people, a cure for every thing; and what at this time probably gave him the idea, was the ſchool-maſter of the pariſh then joining the crowd.

The ſchool-maſter generally lets blood, as one part of his parochial duty. As the patient was given over long ſince for loſt, the propoſed remedy met with little oppoſition from his friends, having as little hopes of its ſucceſs. Accordingly his arm was tied up, as he lay on the ground, and blood let from a large orifice, (not being over nice in the operation), and the blood was allowed to flow on the ground. Scarcely was this performed, when the boy began to look up, and recover from the fit. Though it was only looked on as a protraction, not as a cure of the complaint, yet his arm was taken care of, and bandaged. However, to their great joy, and contrary to their expectation, he recovered perfectly, and has never ſince had another fit, though it is now above a year. In the ſpace of a few days his looks altered, and he ſoon became as fat and fair as ever he was in his life.

This relation I had firſt from the miniſter of the pariſh, a very worthy man, who was perfectly acquainted with every thing relating to the

 caſe,

caſe, and whoſe veracity is unqueſtionable; and again from the ſchool-maſter who bled him.

What I wiſhed moſt to aſcertain, was the quantity of blood loſt. This I was not able ſatisfactorily to learn, as it was ſuffered to flow on the ground; but according to the ſeveral queſtions I put to him, in order to have ſome idea of it, I think it could not be leſs than between two and three pounds.

As this is a diſeaſe that very frequently happens, and as yet has kept beyond the reach of phyſic in moſt inſtances, when it has once been confirmed into a habit in the conſtitution, every thing which has ſucceeded as a cure in any caſe, whether by accident, as the preſent, or otherwiſe, ſhould be faithfully communicated to the public. It is but giving the patient a fair trial for his life, when one remedy fails, to have recourſe to another, till we have gone through every one which ſeems to have any probability of ſucceſs, or has ever, in any inſtance, ſucceeded. Neither bliſters, iſſues, ſetons, the actual cautery, powder of orange-leaves, the preſent much boaſted flowers of zinc, and all the other claſs of antiſpaſmodics in daily uſe, will in every caſe anſwer; yet no one of them is to be over-

looked

looked as uſeleſs. And from the preſent caſe, which is faithfully related, we ought to turn our attention to large bleedings, eſpecially in ſome habits; and perhaps it may be found to ſucceed in more caſes than at firſt view we might be led to ſuſpect: Its great antiſpaſmodic powers are known, and daily acknowledged by all the faculty.

Blood-letting ſeems the more to be depended on, from another caſe told me by a gentleman, a ſtudent of medicine, to whom I had related the preſent. He had read, but did not then recollect where, of a caſe ſomewhat ſimilar: It was of an epileptic patient falling down in a fit, and accidentally having his temporal artery opened by ſome ſharp ſubſtance on which he fell; it bled profuſely before it could be ſtopped, and the patient was radically cured by the hæmorrhagy.

XI.

XI.

History of the Cure of a dangerous Obstruction in the Trachea, in which Mr Mudge's Inhaler was used with Advantage. By Mr John Sherwin, *Enfield, Middlesex.*

ON the 16th of May last, I was called to the assistance of a young woman about twenty-five years of age, of a remarkably florid countenance and healthful appearance, who had complained pretty much, for upwards of a week, of a difficulty of breathing, which had been getting gradually worse, and was then exceedingly troublesome. Her spirits, however, were very good; and, notwithstanding a loss of appetite, and some pains in her limbs, she did not appear to be otherways much disordered. But the manner in which she drew her breath, was sufficient to make me consider her case as a serious one. I could distinctly hear something move backwards and forwards in the windpipe every time she respired. The noise which it made was such as may be conceived by supposing a small leaf of a tree to have been moved backwards and forwards in the passage, which was at the same time attended with considerable wheezing.

This

This laſt, however, did not give her much concern, as ſhe ſaid ſhe had been troubled with wheezing at times upwards of twelve months, and to ſuch a degree that ſhe was often told ſhe was broken-winded. She had had the hooping cough in her infancy, and had been all her life, as far back as ſhe could recollect, ſubject to a huſkineſs in her throat, which had been attributed to that diſorder.

I informed her friends, that though ſhe was then able to ſtir about very cheerfully, I was apprehenſive there was ſome fixed obſtruction in her windpipe, from which ſhe would be in danger of ſudden ſuffocation.

I blooded her largely in the arm, which brought on a long, and, in her ſituation, rather an alarming fainting. Some opening medicines, and an expectorating mixture, were preſcribed.

May 17. The bleeding and other remedies had not contributed to the patient's relief. Her breath was more obſtructed, and the noiſe increaſed.

℞. Tart. emetic. gr. iv.
Pulver. ipecac. dr. ſſ.
Oxymel. ſcillitic. unc. i.
Acet. vin. alb. unc. iii. M. Capiat cochl. commune bis die ciere vomitiones.

The

The firſt doſe was taken this day in the fore-noon, and ſeemed to give great relief, as ſhe breathed great part of the day afterwards without the uſual noiſe in the trachea; and was able to lie down in bed ſome hours, during which ſhe enjoyed the moſt refreſhing ſleep that ſhe had known for many days. But in the evening ſhe awoke with her uſual difficult manner of breathing; and, as night approached, became gradually much worſe. This induced her to take a ſecond doſe of the emetic mixture agreeable to the preſcription. During its operation ſhe was in great agitation and anxiety; the attendants heard ſomething crack in her throat, and ſhe was herſelf ſenſible of a bad taſte and ſmell. The danger of ſuffocation became now infinitely greater than it had ever been, and I was ſent for in the utmoſt hurry. Near an hour being neceſſarily loſt before I could get to her aſſiſtance, I expected to have found her dead; but ſhe was ſtill ſtruggling in great agony. My firſt object was to throw open the window, and place her with her head out of it; but ſhe was unable to remain many ſeconds in any one poſture; excepting now and then, when ſhe flung herſelf back like a dead weight into a chair, where

where ſhe would continue two or three minutes ſo ſtill and quiet, that it was not eaſy to know that ſhe breathed at all, but by the motion of the cheſt. From this ſituation, in an inſtant ſhe was often obliged to jump up and move quickly ſeveral times round the room, inſpiring with the utmoſt difficulty, with a noiſe not unlike the imperfect crowing of a young cock. And frequently ſhe made a very violent effort to hawk up ſomething which all the byſtanders were ſenſible, from their own ſympathy, obſtructed her windpipe. Sometimes for two or three minutes, her breathing was attended with a rattling ſo loud and extraordinary, that it brought ſeveral people into the ſtreet. In this ſituation I expected every moment would be her laſt, and that ſhe had no chance but in bronchotomy. Upon propoſing this operation, ſhe anſwered with great earneſtneſs, ſhe would die firſt, ſhe would never conſent to be cut.

Near half an hour had now elapſed, without any other mode of relief occurring to me, as indeed I fully expected that death would finiſh the ſcene long before a meſſenger could go to my houſe and return. And, from the effect of bleeding

bleeding the day before, I was unwilling to have recourſe to it a ſecond time.

Upon her continuing to hold out, contrary to my expectation, I ſent a meſſenger for a large bliſter to be applied to the throat; and ſoon after, it occurred to me, that Mr Mudge's inhaler might be of ſervice, and a ſecond meſſenger was diſpatched for it; on whoſe return, it was immediately tried three parts full of warm water. The firſt effect of this inſtrument was highly flattering. Almoſt at the moment of ſuffocation, ſhe made four full and free inſpirations, and as many expirations, through it. But preſently the ſuffocating obſtruction returned; and again her mouth was applied to the machine, but not always with the ſame advantage as at firſt; it was always, however, of uſe, and frequently for a moment rendered reſpiration quite free, ſo as to admit of a full inſpiration without the noiſe.

In this laborious and truly diſtreſſing ſituation, ſhe continued upwards of four hours; ſometimes ſtruggling moſt violently for breath, and at other times bleſſed with a momentary reſpite. At midnight ſhe became more quiet, and by degrees, upon being put to bed, began to breathe

ſo

fo freely that I ventured to leave her. Still, however, I thought it proper to make a very guarded prognoftic, as there had been no material difcharge that could account for the ceffation of the fymptoms. It appeared to me, that the obftructing fubftance had accidentally taken a different fituation. But my patient, whofe judgment, on account of her exquifite feelings, ought not to be difregarded, attributed her eafe in a great meafure to the ufe of the inhaler.

18. I found fhe had paffed the remainder of laft night with fome fleep, and much more comfort than could have been expected. All this day, fhe was able to ftir about till evening, when fhe had again fome violent efforts to expectorate, and once thought fhe fwallowed fomething which came from her windpipe; but of this fhe could not be certain, being only fenfible of a difagreeable tafte.

From this time fhe got gradually better. On the 25th, I called upon her, and found her wheezing in fuch a manner as in any other patient would have been confidered as a very troublefome diforder, but which fhe thought little of. She faid, fhe could ftill feel fomething like rags in her throat.

During

During the whole of my attendance on this patient, I was never able to discover any appearance of swelling or inflammation in the tonsils, though doubtless the disorder in the trachea must have originated from inflammation. When I consider the gradual manner in which this disorder came on, and the great length of time that the patient was predisposed to it, I cannot regard it as a genuine case of cynanche trachealis or croup, a disorder so very fatal to infants. But the sense of suffocation which she experienced, was exactly the same as that in the croup, where a preternatural membrane is formed in the trachea.

From the effect of Mr Mudge's inhaler, in the above case, I am persuaded it will be a very valuable acquisition to the Faculty, especially in the cure of the cynanche trachealis. Suffocation comes on, in this disorder, before the cavity of the trachea can be said to be *filled* with an extraneous substance, and seems evidently owing to a *spasmodic* constriction of the rima glottidis; and as far as the suffocation depends upon spasm, one may have the best reasons for expecting that this machine will give relief.

I very well remember a caſe of the croup, ſome years ago, which proved fatal in a few hours, to a fine child, who, at firſt, was not ſuppoſed to be in much danger. From the nature of his ſymptoms, and the appearances of the trachea upon diſſection, I am perſuaded he would have had a much better chance for his life, had the knowledge of this machine been then communicated to the world.

The following is the caſe, with the morbid appearances upon diſſection, as communicated at the time, to one of the firſt medical characters in London.

"On Sunday noon, I was firſt ſent for, and found the child's breath much affected, ſeemingly as if the rima glottidis had been ſpaſmodically conſtricted, or half filled with ſome foreign ſubſtance. It did not ſeem able to inflate the lungs fully. The voice had a peculiar dry ſound; and the pulſe was greatly accelerated, which did not ſeem owing to fever, as the tongue was clean, and the appetite for food not much impaired. The child had, for three or four days previous to this, a hoarſeneſs, and ſymptoms of having caught cold, which did not at all alarm the nurſe. But now the breathing

was ſo remarkably affected, that there appeared to be ſome danger. When I called in the evening, I found the breath conſiderably worſe; every inſpiration exactly reſembling that which ſucceeds a fit of the hooping cough. In this ſituation the child continued about twelve hours, and then died.

"Upon diſſection, I found the cavity immediately beneath the epiglottis nearly filled with a ſlimy pus; and the internal ſurface of the trachea and cartilages was almoſt uniformly covered with matter about the thickneſs of a half crown piece. Upon ſcraping off this matter, its conſiſtence was ſuch, that I could take up pieces as large as a ſmall filbert upon the point of a pin. The inferior ſurface of the epiglottis was curiouſly covered over with the ſame. The tonſils were a little enlarged, and there was a ſmall ſlough upon each, which was eaſily removed, notwithſtanding it appeared in places to penetrate into the glands, the ſurface of which, upon removing the ſlough, was full of little holes, and irregular enlargements (I ſuppoſe) of the natural mucous ducts. From the ſloughs, one would ſuppoſe that the child had alſo the ulcerated ſore throat, which is now ſo frequent in this neighbourhood;

bourhood; but as he never complained of difficulty in ſwallowing, nor had any ruſh, febrile heat or anxiety, till ſymptoms threatening ſuffocation came on, that could not be the caſe. Indeed, there is ſuch an eſſential difference in the ſymptoms, that the common people almoſt immediately diſtinguiſh the one from the other. It appears to me to be merely a topical inflammatory affection of the internal ſurface of the windpipe, probably often occaſioned by the application of cold air. The mucus depoſited here, ſeems to occaſion the ſpaſmodic conſtriction, which, as far as I can find, has been the fatal ſymptom in all that have died in this place. I attended two other children, who both recovered, but for ſeveral days they had a rattling in the throat (one of them in particular), as ſtrong as that of a dying adult. Small doſes of tartar emetic, ſufficient to excite retching, with a bliſter applied lengthways, the whole extent of the throat, ſeemed greatly inſtrumental to the recovery of theſe two children."

Dr Crawford, in his valuable Theſis de Cynanche Stridula, printed at Edinburgh in the year 1771, ſays, "Cum ſuffocatio ob ſpaſmum "imminet, tum ex antiſpaſmodicis auxilium pe-

"tere fas sit; cum paroxysmus talis inopinato "ingruat, et nec dolor, nec febris, nec alia morbi symptomata præivere, ad hoc consilium, "moschum magnis in dosibus extulit Dr Millar." This, in Dr Millar's opinion, "proved "anodyne and diaphoretic; the *spasms* were allayed; a gentle moisture was diffused over the "whole body."

He found, however, that the musk was not always successful, and had recourse to large doses of a solution of assafœtida, which, Dr Millar observes, children may be prevailed on to take much more freely than might reasonably be expected. "Sed, cum vir ille cynanchen stridulam omnino quasi generis nervosi affectionem ducat, et cum tam cito decurrat morbus, "vix nobis saltem patet, quare non statim ad "opium confugiebat, qua maxime confidunt "medici, summa cognitione præditi, in *spasmis* "*domandis.*"

I am persuaded, that Mr Mudge's inhaler will more immediately answer the desirable intention of *allaying* the *spasms*, and *diffusing a gentle moisture* over the whole body; especially, perhaps, if the antispasmodic property of the warm vapour should be improved by the addition of a moderate

moderate quantity of the tinctura thebaica, or of a watery ſolution of opium. It is a remedy which may be immediately applied, and, as the diſorder is inflammatory, may poſſibly be uſed with ſafety, when opiates given into the ſtomach might be prejudicial.

The uſe of this machine, in the inflammation of the trachea, ought always to be ſuperintended by one of the Faculty, or particular directions given, as the nurſes are very apt to begin with it much too hot, in which caſe it ſtimulates and does harm.

XII.

A remarkable Caſe of Epilepſy and Dyſphagia Spaſmodica, cured by the Uſe of Cuprum Ammoniacum. By Dr John Heyſham, *Phyſician,* Carliſle.

JANE STOCKBRIDGE became a patient of mine on the 9th of January 1780. She is an unmarried country woman, in the forty-ſecond year of her age, of middle ſtature, and of a lax habit of body. About twelve years ago, either from trouble, or a fright, as ſhe imagines, ſhe

was ſeized with fits; which, during the ſpace of a quarter of a year, returned once in twenty-four hours, and generally in the night. They afterwards became more frequent, eſpecially in the ſummer months, when ſhe was deprived of her memory, and indeed of almoſt all her mental faculties. Within theſe two years, they have only returned about twice or thrice a-week. In theſe fits, ſhe becomes inſenſible, her legs, her arms, and many of the muſcles of the trunk of her body, are ſo violently convulſed, that three men are ſcarce ſufficient to hold her; ſhe foams at the mouth, and in this ſtate ſhe often continues near an hour; then gradually recovers, but is utterly ignorant of what has paſſed. About ſeven years ago, without any evident cauſe, ſhe was affected with a new and peculiar diſorder, *viz*. a difficulty of ſwallowing, with a ſenſation of ſtricture and tightneſs in her throat and breaſt; and was unable to ſwallow either ſolids or fluids for the ſpace of ſeventeen days. During this time, ſhe had no epileptic fits, was entirely ſupported by nouriſhing glyſters, and had neither any evacuation by urine or ſtool, but had a ſmall diſcharge of blood from her ears. Some remedies

dies were added to the glyſters, which, however, were attended with no ſenſible effects.

On the 17th day, a probang was introduced into her ſtomach; on the immediate removal of which, ſhe fainted near a quarter of an hour, then recovered, was able to ſwallow both ſolids and fluids with eaſe, had a ſtool, and made near a gill of urine of a gelatinous conſiſtence. This difficulty of ſwallowing, or dyſphagia ſpaſmodica, continued to return regularly every month for two years, and was conſtantly removed in the ſame manner, by the introduction of the probang, with this difference only, that in the ſecond year, upon withdrawing the inſtrument, inſtead of fainting, ſhe was ſeized with ſtrong convulſions. During the third year, ſhe was perfectly free from the dyſphagia. But the fourth year, it again returned without any evident cauſe, and ſhe had four or five paroxyſms. The paroxyſms became more frequent in the fifth year, *viz.* about once a month, and have continued without much variation till the preſent time.

On the morning of the 7th of January 1780, ſhe was again affected with the dyſphagia; and on the 8th, I was preſent, when Mr James, a ſurgeon in this town, with ſome difficulty,

on account of the ſtricture in the gullet, introduced the probang into her ſtomach; and on its being withdrawn, a ſcene truly melancholy and alarming preſented itſelf to our view. She was ſeized with moſt violent convulſions; her head was bent forcibly backwards, ſo as to touch her back; and it was as much as three ſtrong aſſiſtants could do, to prevent her from beating herſelf to pieces. Theſe convulſions continued half an hour, when ſhe was able to ſwallow a little æther and water, but remained two or three hours in a diſagreeable ſituation, which, however, ſhe is unable to deſcribe. Since the firſt attack of the dyſphagia, ſhe has ſometimes deferred the uſe of the probang for the ſpace of ſix days, during which time ſhe never has any evacuation by ſtool or urine, but immediately after the operation has frequently obſerved her urine to be gelatinous. When free from the dyſphagia, ſhe is conſtantly affected with the epilepſy, ſo that ſhe has now laboured under the former, ſeven years, under the latter twelve years. When free from fits, her appetite is good, belly natural; menſes have always been, and continue to be regular, and in all other reſpects is in tolerable health, and able to perform

her

her ordinary bufinefs. She is fenfible of the approach of the epileptic fits, but the dyfphagia comes on fuddenly; and during its continuance, fhe complains of little or no pain, but has a fenfation of ftricture and tightnefs in her throat. She has taken a variety of medicines, but has reaped no advantage from any thing but æther, the good effects of which were very flight and tranfitory. In this truly diftrefsful cafe, taking into confideration the afcribed caufe of her diforder, the relief fhe had received from æther, her lax habit of body, and efpecially the abfence of all fymptoms which indicated any local affection of her head or brain, I apprehend, a great degree of irritability, depending on a laxity of the nervous fyftem, might, in a great meafure, be the caufe of all her complaints. Well acquainted with the ftrengthening and tonic properties of copper, I was refolved to give it a fair trial, and am happy to find by the event, that it has anfwered my moft fanguine expectations. January the 9th, I accordingly prefcribed the following pills, ℞. Cupri ammon. gr. xxxii. micæ panis, dr. ii. ff. Syrup. fimp. q. f. fiat maffa, in pilulas 64 æquales dividenda. She was ordered to take one of thefe pills every morning and night, and to

to encreaſe the doſe according to circumſtances. January 26th, ſoon after ſhe takes the pills, they have a very peculiar effect upon her, which ſhe is unable to deſcribe; ſhe, however, continued them for five days, when ſhe omitted them for ſeven days. She then began again, and took one, night and morning, with nearly the ſame effects. The epileptic fits returned every day for 10 days; ſince that time, ſhe has only had a fit once in three or four days. Let her take three pills every day, and, if ſhe is able, encreaſe the doſe to four. February 10th, Has taken all the pills, and has had but two fits ſince laſt report. Let her have double the quantity of pills, and let her encreaſe the doſe, according to the effects they produce. February 28th, Began with four pills each day, which produce nearly the ſame effects as two did when ſhe firſt took them. She has now encreaſed the doſe to ſeven or eight every day, without any ſenſible effect. Continues free from fits. Let her have ſome more pills. March 16th, Has continued to take eight or nine pills every day, they produce no ſenſible effects. Has had no fit. Let her have more pills. April 1ſt, Has taken all the pills, and encreaſed the doſe to eleven in the day.

Continues

Continues free from fits, and thinks herſelf perfectly well.

June 17th. Has continued perfectly well ſince the 3d of this month, at which time ſhe was ſeized with a violent looſeneſs, which laſted ten days, and then ceaſed without the uſe of remedies. On the ſeventh, or four days after ſhe had been affected with the looſeneſs, ſhe was again ſeized with the epileptic fits, and has had one or two every day ſince. They continue about one hour, during which ſhe is inſenſible and much convulſed. Has had no return of the dyſphagia; but ſince the looſeneſs, has been frequently affected with hiccup and ſymptoms threatening ſuffocation, which however go off as ſoon as ſhe gets a free diſcharge of wind upwards. Appetite pretty good, ſleeps tolerably, has no thirſt, and her belly and menſes are regular. Let the pills of cuprum ammoniacum be repeated; let her begin with one morning and night, and encreaſe the doſe as before directed.

July 5. On the 18th of June, began to take the pills, and took one night and morning as ordered. They now produce ſymptoms very different from what they did before. About

bout a quarter of an hour after ſhe has taken them, ſhe becomes giddy, light-headed, and in every reſpect ſeems to be in a ſtate of intoxication. Theſe ſymptoms continue about an hour, when ſhe is affected with nauſea and ſickneſs at ſtomach, but never vomits; afterwards, ſhe breaks out into a ſweat, in which ſhe continues near an hour, and then becomes perfectly well. Since the 22d of June, has been entirely free from fits, hiccup, and all other ſymptoms which uſually threaten or precede them. Her menſes did not appear the laſt period. Her appetite is good and her belly regular. Let her take a pill and an half every morning and night.

Tueſday July 25. Has continued the pills; but, from ſome miſtake in the directions, has only taken one pill and a half in the day, inſtead of three; this quantity, however, produces the uſual effects. She has been in good health, and free from all her complaints, till two o'clock on Sunday morning, *viz.* 23d, when ſhe was ſeized with the dyſphagia, and has not been ſince able to ſwallow the leaſt particle of either ſolid or fluid food. In other reſpects ſhe is in good health, and complains of a ſenſation both of hunger and thirſt, and has had no evacuation either

either by ſtool or urine ſince ſhe was affected with the ſpaſm. On Friday, July 21. ſhe very imprudently aſſiſted in removing ſome hay from the banks of the river Eſk, which were overflowed; in this buſineſs ſhe was obliged to wade up to the knees in water for a conſiderable length of time, during a very heavy and inceſſant rain. To this circumſtance, fatigue, *&c.* ſhe attributes, I think with reaſon, the preſent attack.

Wedneſday 26th. About 11 o'clock *A. M.* the probang was introduced; and, as ſoon as it was withdrawn, ſhe ſwallowed without any difficulty a little æther and water. No convulſions or alarming ſymptoms occurred, as had been uſually the caſe before; ſhe was only affected with ſome trifling ſpaſmodic contractions of the ſtomach and gullet, attended with no pain, but with a peculiar kind of noiſe, and eructation of wind; all which however ſoon went off, and ſhe became perfectly well. Her menſes appeared almoſt immediately after the operation. Let her continue one pill and a half night and morning for a few days, and then increaſe the doſe to two pills twice a-day.—Auguſt 12th. Has been free from fits, and has had no return of the dyſphagia, and in every reſpect is in very good health.

health. She has taken four pills a-day ſince the 30th of laſt month. They ſtill continue to produce ſymptoms reſembling intoxication. Repeat them and let her take two night and morning.—September 7th. Has finiſhed her pills ſome time ago; and remains free from fits, but has complained of great pain in her head for ſome days; belly coſtive. Let her head be ſhaved and apply a large bliſtering plaſter to it. ℞. Maſſ. pil. ruf. dr. ii. aſſafœt. dr. i. ſyrup. rhei. q. ſ. M. fiat maſſa dividenda in pilulas 40 æquales. She was ordered to take two or three of theſe pills every night at bed-time. Let the copper pills be omitted.—October 4th. The bliſter was applied as directed; it remained on the head 48 hours, diſcharged a conſiderable quantity of lymph, which removed the complaint of her head. She has likeways taken all the laxative pills; they procured a ſtool or two every day. While ſhe was taking them, ſhe ſweated profuſely, and what is ſomewhat remarkable, the ſweat tinged her linen of a yellow colour. Has had no return of the epilepſy ſince the 22d of June, nor of the dyſphagia ſince the 26th of July. At preſent is free from all complaints. Let her have a box of the copper pills and

and be dismissed, with orders to return should any change occur in her situation.—October 28. Having business in town, she called to acquaint me that she has had no return of her fits, although she had not got the last box of pills, owing to a want of cuprum ammoniacum. On Monday last in the night she had a discharge of blood from both her ears, which was preceded by some little pain in her head, which is now gone off. Has had no appearance of menses since the 26th of July. Sumat pulv. cort. Peruv. dr. ss. bis quotidie.

Dr Heysham, in a letter to Dr Duncan in January 1781, informs him, that this patient then continued in perfect health, without any return either of the dysphagia or epilepsy.

XIII.

A Case of Epilepsy cured by Cuprum Ammoniacum, *communicated to Dr Duncan by* Dr John Heysham, *Physician, Carlisle*

AUGUST 21. 1779. John Ridley, a labourer, aged 27 years, of a florid complexion and stout habit of body, was about 10 years ago

ago affected with a fit, which began with a ſenſe of numbneſs in his right hand. This numbneſs immediately proceeded up the arm to his head, when he fell down, foamed at the mouth, and was affected with ſtrong convulſive motions of his legs, arms and trunk of his body. In this ſituation he continued near half an hour. He then recovered, but had no recollection of what had happened. Three years elapſed before he had another fit; and for ſeveral years after, he had ſeldom more than one each year. About ſix months ago they became more frequent, but obſerved no regular period; ſometimes they returned every day for a week together, at other times every third or fourth day. On his applying to Mr Hodgſon ſurgeon in this town, he immediately began to take the cuprum ammoniacum. He was ordered one pill night and morning, which created a little degree of nauſea, but no vomiting; the doſe was afterwards increaſed to three pills every day. Before he had taken 48 pills, he was perfectly free from fits, and has continued ſo till the preſent time, *viz.* 17th January 1781.

XIV.

XIV.

The History of a singular Case of Delirium from an Wound of the Head. By Mr George Borthwick, *Surgeon of the 14th Regiment of Light Dragoons.*

A Corporal of this regiment got into a riot about two miles from the barracks, and was knocked down by a pitch-fork. The blow which he received occasioned a lacerated wound, which extended about two inches on the integuments covering the superior and middle part of the left parietal bone. The man, I believe, lost near two quarts of blood from the wound before I saw him, which was not till he returned home two hours after the accident. On examining the wound, I found it filled with coagulated blood, which I removed with my finger. Upon this, the hæmorrhage, which had not entirely ceased, became again very violent. The pericranium adhered firmly to the bone; and, on examining with the probe, there was no inequality or mark of fracture to be discovered. His pulse was small and unequal, his extremities were remarkably cold, and a delirium was coming on.

As I confidered his fymptoms to be owing to the great lofs of blood he fuftained, rather than to any extravafation within the fkull, I dreffed the wound with charpie, and ordered him fome nourifhing broth; but I foon found, that the application of the charpie was unable to reftrain the hæmorrhage. I therefore removed the dreffings, and enlarged the wound with a fcalpel. My reafon for doing fo was, that the half divided veffels, from which the blood oozed profufely, both of the pericranium and teguments, might, from a free divifion, be allowed to retract and put an end to the hæmorrhage; and likewife to obtain the advantage of a divifion of parts inflamed and in a ftate of tenfion. On the dilatation being made, the hæmorrhage foon ceafed; but the patient became very delirious, in fo much that five men could fcarcely keep him in bed. The delirium went entirely off in the fpace of fix hours, and was fucceeded by a refrefhing fleep. Next morning (Aug. 4.) he felt himfelf tolerably eafy, but remarkably weak. On the evening he became very feverifh, and continued fo for two days, when every degree of fever entirely left him. The wound looked well, and difcharged a laudable pus on the third day

day from the accident. He had now very little uneafinefs, excepting only flight pains that feized his head at times, but lafted only a few feconds. From this time he continued to do well, and the wound to heal kindly, till Auguft 28. when, in the evening, he became as delirious as at firft, and continued fo for five days. He was fo outrageous, that little affiftance could be given him. Sinapifms applied to his feet feemed to do him much fervice. It was with great difficulty that he could be held fo as that I might drefs the wound on his head, which to my furprife wore a very favourable appearance, and was entirely healed on September 7. He continued well and able to walk about in his room until September 15. when the delirium returned with as much violence as before. It lafted one night, and went entirely off, leaving him however fomewhat weak, from his ftrength being much exhaufted by the efforts he made during its continuance. From this time he continued free from any complaint or return of delirium until the 2d of October, when it again recurred, and lafted for two days. After it went off, his ftrength, as ufual with him after thefe attacks, was much reduced; but he foon recover-

ed it, and continued in every reſpect well for more than a month, when he obtained a furlow to go to the country for the better re-eſtabliſhing of his health. During his abſence from quarters, which was three months, he was ſeized with a giddineſs, which laſted for a day, and went off. He has not had any returns of delirium ſince October 2. and is now perfectly well.

XV.

Account of the advantageous Effects derived from the Cortex Simaroubæ, in an obſtinate Fluor Albus. By Dr William Speer, *Phyſician in Dublin. Communicated to* Dr Duncan.

I Was, on the 20th of laſt March, called to the aſſiſtance of C. W. a young woman about the age of twenty-five, who was very much weakened by an immoderate flux of the catamenia, to which ſhe had before been ſubject. She had been, as I was informed, of an healthy conſtitution, and pretty regular in her monthly evacuations, till about three months before I ſaw her. She was, when labouring under the diſcharge,

charge, overheated by waſhing ſome linen; the conſequence of which was, that the catamenia flowed to ſuch a quantity as to throw her into a ſyncope; which obliged her aſſiſtants to put her to bed, and call a midwife to her aſſiſtance, who ordered her ſome cordial medicine, and ſupported her with a nouriſhing diet; and in the ſpace of twelve days ſhe was free of the diſcharge of the catamenia, but was afterwards attacked with a ſevere fluor albus; and, from her own account, every third week after this period, ſhe obſerved her menſes to return, but in a very ſparing quantity. By the exceſs of the former evacuation which ſhe laboured under, as well as the one to which ſhe was ſubject when I ſaw her, ſhe was reduced, by her friends account of her, from a healthy conſtitution to an exceeding weak and emaciated habit of body, and was often ſeized with ſyncope and hyſteric fits.

The very great recommendation which I received ſome ſhort time before this caſe occurred, of the tonic virtues of the cortex ſimaroubæ in obſtinate uterine fluxes, from a very ingenious apothecary, induced me to make trial of that bark in this woman's diſeaſe. I had indeed before uſed it in a ſimilar one; and there it anſwered my moſt ſanguine wiſhes.

The patient had a total loſs of appetite; was inclined alſo to coſtiveneſs; her pulſe weak and intermitting. The ſtate of her diſtemper, therefore, required that the flour albus ſhould be put a ſtop to, and that her decayed ſtrength ſhould be reſtored; and with a view of anſwering the indication propoſed, ſhe was preſcribed the following decoction.

Coque cort. ſimaroubæ craſſe pulv. unc. i.
in vin. rub. Luſitan. lb. ſſ. et
aquæ font. lb. i. ad lb. i. cola, et adde
Elix. vit. acid. ſcrup. duos. Syr. ſimp. unc. i. ſſ. M. pro uſu.

Cujus capt. coch. duo mag. tertia quaque hora.

Injiciatur enema purgans ſtatim.

Injiciatur vagin. necnon injectionis ſequentis unc. una, ter quaterve de die.

℞. Decoct. ſupra præſcripti, unc. vi.
Sacchar. ſaturnii, gr. i. M. fiat inject.

March 23. She finds herſelf eaſier, the diſcharge being now ſomewhat diminiſhed, but complains of conſiderable loſs of ſtrength, and that the clapping or ſhutting of a door haſtily, throws her into violent palpitations. The opening injection, which was adminiſtered the 20th, had the deſired effect, ſince which ſhe has had

no

no ſtool. Her pulſe is ſoft and weak; ſhe has got little natural reſt for two preceding nights.

Cap. ſal. Glauberi cath. dr. vi. ſtatim, more ſolito;

et hauſt. anodinus, H. N. hora decubitus.

March 24. The purgative procured her two or three motions yeſterday, and ſhe ſlept tolerably well laſt night; ſhe has had no return of the palpitations; pulſe ſtronger and firmer. As the cortex ſimaroubæ ſits eaſily on her ſtomach, ſhe was ordered the following preſcription.

℞. Pulv. ſubtiliſſ. cort. ſimaroub. dr. ſſ. vin. rub. Luſitan. unc. i. Syr. ſimp. dr. i. ſſ. M. fiat hauſt. tertia quaque hora repetend.

Utatur inject. e cort. ſimaroub. ut antea.

25. She has this day a return of the flooding, which however was ſoon put a ſtop to by the uſual applications; as alſo of the palpitations; pulſe ſoft and feeble; belly bound.

Injiciatur enema domeſtic. ſtatim.

Capiat hauſt. ut antea juſſum, ſecunda quaque hora.

Utatur infuſ. roſar. rub. pro potu ordinario:

Let her diet conſiſt of nouriſhing food.

26. Had no return of the flooding ſince yeſterday; ſhe has had two motions from the in-

jection yesterday evening; got some natural rest last night; pulse stronger, and she thinks she is recovering her strength.

Continuentur medicamenta.

March 27. Slept well last night; pulse 68, and soft; her stomach, which had hitherto been much disordered, is now so much strengthened as to make her complain of hunger.

Continuentur medicamenta.

28. The flour albus has now stopped; she continues to gain strength daily, and finds herself free from all complaints; and is at present so well recovered as lately to have been induced to enter into matrimony.

SECT.

SECT. IV.

Medical News.

THE works of the late Dr David M'Bride of Dublin, having rendered him univerſally known, not only as a Phyſician but as a Philoſopher, the following particulars of his life, we preſume, may prove acceptable to our readers.

Dr M'Bride was deſcended from an ancient family of that name in the ſhire of Galloway in Scotland; his grandfather was bred to the church, and was called over about the end of laſt century, to officiate at Belfaſt to a congregation of preſbyterians.

Dr M'Bride's father was alſo bred to the church. He married a daughter of Mr Boyd of Killabeg

Killabeg in the county of Down, and was minister of Ballymony in the county of Antrim, where David was born on the 26th of April 1726.

He received the firſt elements of his education at the public ſchool of Ballymony; and after ſerving an apprenticeſhip to a ſurgeon of that place, he went into the royal navy, where having ſerved for ſome time as mate in an hoſpital-ſhip, he was at laſt appointed to the rank of ſurgeon, in which ſtation he remained for ſome years preceding the peace of Aix-la-Chapelle.

It was at this period that he firſt turned his thoughts towards the diſcovery of a remedy for the ſcurvy; a diſeaſe which a ſea-faring life had afforded him many opportunities of obſerving in all its ſtages.

After the peace of Aix-la-Chapelle, Mr Mac-Bride went to Edinburgh and London, where he ſtudied anatomy under Drs Monro and Hunter, and midwifery under Dr Smellie; and he attended the lectures of other diſtinguiſhed teachers on different branches of medicine.

About the end of the year 1749, he ſettled in Dublin as a ſurgeon and accoucheur. But being young, and remarkably baſhful, he re-

mained

mained a number of years in obscurity, little employed among people of rank. His great abilities were then only known to his family connections, and to a circle of select friends. These, however, were captivated with his company, not only from his being possessed of agreeable manners and a fine disposition, but from his general knowledge in painting, music, and other branches of polite literature.

His Experimental Essays, which were first published in 1764, were received every where with great applause, and were soon translated into different languages; and the singular merit of this performance induced the university of Glasgow to confer the degree of Doctor of Physic on its Author.

The improvement introduced by Dr M'Bride in the art of tanning, by substituting lime-water for common water in preparing ooze, procured him the honour of a silver medal from the Dublin Society, in the year 1768, and of a gold medal of very considerable value from the Society of Arts and Commerce in London.

For several years after Dr M'Bride obtained a degree in physic, he employed part of his time in the duties of a medical teacher, and delivered

livered at his own houſe, a courſe of lectures on the theory and practice of phyſic, which were no leſs uſeful to thoſe who embraced this opportunity of improvement in their profeſſion, than they were creditable to the lecturer.

In the year 1772, theſe lectures were publiſhed at London in one volume quarto, under the title of, An Introduction to the Theory and Practice of Medicine; and in the year 1774, they were tranſlated into Latin, and publiſhed at Utrecht in two volumes octavo.

A ſecond edition of this work, in an Engliſh dreſs, corrected in ſome particulars, and enlarged in many others, was printed at Dublin in 1777; and it may juſtly be conſidered as a publication, from an attentive peruſal of which, the diligent practitioner, as well as the induſtrious ſtudent, may derive much uſeful inſtruction.

The abilities of Dr M'Bride being by theſe means univerſally known, he at length obtained that high reputation to which he was juſtly entitled. His employment in the line of his profeſſion increaſed ſo quickly, as ſoon to afford him rewards ſuitable to his merit; and the public ſeemed now to wiſh to make amends for having overlooked him ſo long, by throwing more buſineſs

business into his hands than he could manage either with ease or safety.

His extensive employment, particularly as an accoucheur, having for a long time kept him in a perpetual agitation both of body and mind, at last induced a total incapacity for sleep; still, however, he kept in good spirits, and appeared to be in good health till the end of November 1778, when an accidental cold brought on a fever and delirium, which put an end to his life on the 13th day of December, in the 53d year of his age.

His death was sincerely lamented by persons of all ranks. Men of sense and reflection, who knew his value as a citizen, felt for the public on this melancholy occasion: The opulent inhabitants of Dublin felt for their wives and children, deprived of a skilful physician and compassionate assistant in the hour of danger; and numbers of the indigent part of the community felt for themselves, on the loss of a liberal benefactor, whose benevolence had often alleviated their distress.

* * * *

We are favoured with the following account of Dr d'Aubanton's new system of Mineralogy, by

by Mr Ewart, ſtudent of medicine at Edinburgh; to whom it was communicated by Mr Andrew Lumſden of Paris.

Natural hiſtory is a deſcription of what we know of the productions of Nature. Although inquiſitive man has made conſiderable progreſs in the ſtudy of Nature; much, no doubt, ſtill remains to be inveſtigated. Nothing facilitates more than method, this extenſive and intricate, but uſeful and agreeable ſcience. It is therefore divided into three great branches, commonly called Reigns or Kingdoms, *viz.* the mineral, the vegetable, and the animal. The naturaliſt claſſes methodically each body in the kingdom to which it belongs. Two of theſe kingdoms are organized, *viz.* the vegetable and animal, but the mineral is unorganized. As the latter is the moſt ſimple of the three, with it the naturaliſt generally begins his enquiry into Nature.

Dr d'Aubanton, Profeſſor of Natural Hiſtory in the Royal College of Paris, has, in his learned lectures during the years 1778 and 1779, divided the mineral kingdom into four orders, *viz.*

1ſt,

1ſt, Sand, earth, and ſtones.
2d, Salts.
3d, Sulphur.
4th, Semi-metals, and metals.

The characteriſtic marks of the firſt order are, that they do not diſſolve like ſalts; that they do not ſmell like ſulphur; and that they do not ſhine like metals.

The firſt order is ſubdivided into four different claſſes, and theſe are thus diſtinguiſhed, *viz.*

1ſt, Vitrifiable ſubſtances, which emit fire when ſtruck with ſteel, but do not efferveſce with acids.

2dly, Argillaceous ſubſtances, which do not emit fire when ſtruck with ſteel, and do not efferveſce with acids.

3dly, Calcareous ſubſtances, which efferveſce with acids, but do not emit fire when ſtruck with ſteel.

4thly, Sand, earth, and ſtones, formed from a mixture, and conſequently partaking of the properties, in proportion to that mixture, of the vitrifiable, argillaceous, and calcareous ſubſtances.

The ſecond order contains the foſſile ſalts; they are alkaline or neutral; they diſſolve in water, and are not inſipid.

The

The third order is ſulphur, which is diſtinguiſhed by its ſmell. And

The fourth order is the metallic ſubſtances; although not numerous, they are of the greateſt importance in medicine, and in all the various arts. They are very different from any other natural bodies yet known. Indeed, from their ſolidity and denſity, they approach neareſt to ſtones; yet a cubic foot of marble weighs 250 pounds, whilſt a cubic foot of tin, the lighteſt of all the metals, weighs 516 pounds, and a foot of gold, 1348.

They are divided into four claſſes, *viz.*

1ſt, The ſemi-metals, which are not malleable nor ductile.

2d, Mercury, formerly claſſed among the ſemi-metals; it is now claſſed by itſelf, becauſe, by the experiments made by the Academy of Peterſburgh in the year 1759, it appears, that it may be fixed by cold, till it becomes malleable to a certain degree.

3d, The metals that are ductile and malleable; it is difficult to arrange them methodically, ſince it appears by the table that none of them poſſeſs all the metallic properties in the higheſt degree.

4th,

4th, Metallic ſubſtances, compoſed of ſemi-metals and metals.

There are fourteen metallic ſubſtances now known; three of which have been diſcovered by the moderns, *viz.* Cobalt, nickel, and platina. The natures indeed of the two laſt are not aſcertained.

In the foregoing Table, Dr d'Aubanton has thus methodically arranged the mineral kingdom, according to their different natures, and with their diſtinctive characters, which are apparent or eaſily known.

* * * *

The following account of the ſtate of the thermometer and barometer, as obſerved at the Botanical Garden in the iſland of Jamaica, has been communicated by Dr Clarke, ſuperintendent of the garden, to Dr Duncan.

METEOROLOGICAL JOURNAL.

October.

		Bar.	Ther.
7. Morning, higheſt	-	28 7½	75
Loweſt,	-	28 5	70½
Medium,	-	28 6	72½

	Bar.	Ther.
2. Afternoon, highest -	28 6½	89
Lowest, -	28 4½	73
Medium, -	28 5¾	86
Highest during the month,	28 7½	89
Lowest, -	28 4½	70½
Mean height, -	28 5¾	79¼
Rainy days, 19.		

On the 18th, ½ past 3 p. m. a small Fahrenheit's thermometer, exposed to the sun-shine 15 minutes, stood at 108½.

NOVEMBER.

Morning, highest -	28 8	74
Lowest, -	28 6	68½
Medium, -	28 6¼	70¾
Evening, highest -	28 7¾	88
Lowest, - -	28 5¼	74
Medium, -	28 6	79¾
Highest during the month,	28 8	88
Lowest, -	28 5¼	68½
Mean height, -	28 6½	75¼
Rainy days, 14.		

On the 18th, the small thermometer rose in the sun-shine at 3 p. m. after 15 minutes exposure, to 110; and next day, almost at the same hour,

hour, to 112.—Intermittent and remittent fevers said to be frequent in Kingston.

DECEMBER.

	Bar.	Ther.
Morning, highest -	28 8¼	71
Lowest, -	28 6¾	65
Medium, -	28 7¼	67
Evening, highest -	28 7¾	87
Lowest, -	28 6¼	74
Medium, -	27 7	79¼
Highest during the month,	28 8¼	87
Lowest, -	28 6¼	65
Mean height, -	28 7¼	73¼

Rainy days, 15.

Fevers more violent and fatal in town.

JANUARY, 1778.

Morning, highest -	28 8¼	67
Lowest, -	28 6½	64
Medium, -	28 7½	65½
Evening, highest -	28 8	88
Lowest, -	28 6	78
Medium, -	28 7	80¼
Highest during the month,	28 8¼	88
Lowest, -	28 6	64
Mean height, -	28 7¼	72¾

One hour of rain.—Fevers less frequent.

FEBRUARY.

	Bar.	Ther.
Morning, higheſt -	28 8¼	68
Loweſt, - -	28 6½	63
Medium, -	28 7½	65
Evening, higheſt -	28 8¼	90½
Loweſt, -	28 6½	73
Medium, -	28 7½	83
Higheſt during the month,	28 8¼	90½
Loweſt, - -	28 6½	63
Mean height, -	28 7½	74

Four ſhowery days.—Kingſton healthy.

MARCH.

Morning, higheſt -	28 7¾	67
Loweſt, - -	28 7	62
Medium, -	28 7¼	65
Evening, higheſt -	28 7¾	82
Loweſt, - -	28 6¼	74
Medium, -	28 6¾	77¾
Higheſt during the month,	28 7¾	82
Loweſt, -	28 6¼	62
Mean height, -	28 7	72

* * * *

Mr Ronaldſon, one of the aſſiſtant ſurgeons to the hoſpital in Canada, in a letter to Dr Hope, gives him the following account of the ſpeedy termination

termination of a wound penetrating into the colon without any bad confequences.

"One of the Indians here was lately wounded by one of his companions in a drunken quarrel, in a manner which I at firft imagined would be very dangerous, but which was not in reality the cafe. He was ftabbed with a knife on the left fide, near the lumbar vertebræ, about half way between the os ilium and the falfe ribs. There could not be the fmalleft doubt that the knife had penetrated into the colon, as fæces were difcharged by the wound for near three weeks. He had, however, no fymptom of any confiderable degree of inflammation, and was completely cured in five weeks; he is now in perfect health, and able to undergo the fatigues of hunting.

"May not this ferve to fhew, that there would be little danger from cutting into the pofterior part of the colon, in cafes where concretions are lodged there which cannot be difcharged by the natural paffage?"

* * * * *

Although many accounts of the very intenfe degree of cold obferved at Glafgow on the night between the 13th and 14th of January, have

been publiſhed in different news-papers, and other periodical publications, yet we preſume it will not be diſagreeable to any of our readers that it ſhould be recorded in this work.

On Wedneſday January 12. 1780, the cold increaſed all the day, but ſo gradually that at ſunſet it was not more than 12 degrees below the freezing of water by Fahrenheit's thermometer.

Thurſday January 13. at one o'clock in the morning, the atmoſphere being ſtill and ſerene, and the barometer at 29$\frac{9}{10}$ inches, Fahrenheit's thermometer, when expoſed at a high north window in the college court, ſunk to 26 degrees below the freezing point; and in five hours afterwards, it fell ſix degrees more, that is, to 32 degrees below the freezing of water. The ſame inſtrument was then carried to the obſervatory park, and there laid on the ſurface of the ſnow; in which ſituation it fell to 45 degrees below the freezing of water; and this great degree of cold was verified by another very accurate thermometer, which was made by a different hand. The cold increaſed all this day; and obſervations were taken every half hour, from this evening till the ſun roſe on Friday morning.

Friday

Friday January 14. at ſix o'clock in the morning, two thermometers, when hung in the air in the obſervatory park, ſtood at 46 degrees below the freezing point in Fahrenheit's ſcale; and other two, when laid on the ſurface of the ſnow, fell to 55 degrees below the freezing point in the ſame ſcale, while the ſame ſnow, near the ſurface of the earth, was only three degrees below the freezing point. At this time the air was perfectly calm, and though there was a little breeze near the horizon, not a cloud was to be ſeen, and the ſtars ſhone with a full and ſteady light. The cold became much leſs intenſe on Friday evening, and a thaw began on the Saturday following.

Of the accuracy of theſe obſervations there can be no room for entertaining any doubt, ſince they were made by ſeveral gentlemen belonging to the univerſity, on whoſe report the moſt implicit confidence may be put, particularly by Dr Irvine, Profeſſor of chemiſtry, and by Mr Patrick Wilſon, ſon to the ingenious Profeſſor of practical aſtronomy.

The following obſervations were made during the ſame days in the botanical garden at Edinburgh; and will ſerve to ſhew, that the degree

of cold was by no means so intense there as at Glasgow. The thermometer employed was made by that accurate artist Dr Wilson; and it was hung, during the observations, on the north side of a tree in the botanical garden.

On Wednesday the 12th of January, at seven o'clock in the morning, it was 15 degrees below the freezing of water; by four in the afternoon it had risen to 10, and at eleven o'clock in the evening it had fallen to 13 degrees below the freezing point.

On Thursday the 13th, at seven in the morning, it was at 16 degrees below the freezing of water; at four in the afternoon 7, and at eleven at night 22.

On Friday the 14th, at seven o'clock in the morning, it was 25 degrees below the freezing point; by nine o'clock it fell two degrees more, *viz.* to 27; by ten it had risen to 24, and by four in the afternoon to 5, and at eleven at night it stood at 9.

Thus it appears, that in the morning of the 14th, when the cold was most intense at both places, the thermometer, suspended in the air, was 19 degrees lower at Glasgow than at Edinburgh; being at the latter of these places five degrees

degrees above 0, in Fahrenheit's ſcale, and at the former 14 below it.

Dr Irvine, in a letter to Dr Duncan, has the following remark: "A very unexpected circumſtance occurred in the courſe of our obſervations, namely, a conſtant difference of temperature between the air and the ſurface of the ſnow; which was ſometimes 14°, and never leſs than 8° colder than air."

* * * *

At the quarterly meeting of the Royal College of Phyſicians of Edinburgh, on Tueſday the firſt of February, Dr James Hamilton of Dunbar was elected a Fellow,—and Dr William Wright, and Dr Charles Webſter, were admitted Licentiates.

About the beginning of May, Drs Duncan and Webſter will begin, at Edinburgh, their Lectures for the ſummer ſeaſon, on the caſes of Patients ſubjected to Chronical Diſeaſes, and on the Materia Medica.

* * * *

The following Addreſs from Dr Francis Armſtrong, Phyſician at Uppingham, in the county of Rutland, to the Phyſicians and Gentlemen of the Faculty in Great Britain, reſpecting the uſe of

of Matlock waters, may, we presume, afford useful information to many of our readers.

Matlock has long been famed for its mineral springs and baths; but it has, till lately, been frequented by few invalids, though a number of able men have written learnedly upon the properties of its waters, and their effects in different disorders. How it so long escaped the attention of the neighbouring physicians, I am at a loss to account for; as they continued sending their patients to Bristol, to the total neglect of their neighbouring springs, which are equal, if not preferable, to the Bristol water.

Dr Percival of Manchester, that most excellent physician and philosopher, has obliged this nation with a few judicious remarks and experiments, in the second volume of his Medical and Experimental Essays, upon the nature of Matlock waters and bath. This seems to have opened the eyes of the neighbouring physicians and practitioners; the consequence of which has been, that the number of invalids has increased every year; and the very extraordinary cures performed by this water, have lately recommended it in such a manner, that, at this time, it

it is frequented by patients from every part of England.

I have taken great pains to examine particularly into the properties of Matlock ſprings, and may with truth aſſert, that they are of the ſame nature with the Briſtol water, equal in ſome caſes, and preferable in many. Nor do I think that the air of Matlock is obnoxious in the leaſt to conſumptive patients, where the lungs are not injured in ſuch a manner as to render a recovery very doubtful, either from the uſe of medicine or water; nor have I, in my whole practice, had the leaſt complaint of this inconvenience from any of my patients.

I ordered a moſt amiable lady laſt year to drink the Matlock waters, in a confirmed phthiſis pulmonalis, and in ſuch a ſituation, that I muſt own I never expected to ſee her return. Being greatly intereſted in her preſervation, I gave her full directions how to proceed. With much difficulty ſhe reached the place. The company, in a very uncandid manner, cried out, "What a "cruel phyſician, to ſend the lady ſo far from "home to die!" I ſaw the lady but three days before ſhe left home, otherwiſe ſhe ſhould have viſited Matlock much ſooner. She ſtrictly perſevered

ſevered in the rules laid down, and in a fort-night was enabled to dine in public; in ſix weeks, was perfectly recovered, having got rid of her cough, and being greatly increaſed in muſcular habit. I viſited her on her return, and had I not been perfectly acquainted with her before, I ſhould not have known her. She has continued well ever ſince, and I hope will for many years, as a bleſſing to her young family, and a comfort to the beſt of huſbands.

I hope I ſhall be excuſed reciting this caſe, it being one amongſt many, in which I have experienced the good effects of this water; and indeed patients whom I have ſent to Briſtol, and who have returned benefited in ſome meaſure, have afterwards been reſtored to a perfect and laſting ſtate of health, from the uſe of Matlock water.

I have, in the courſe of ſeven years, ſent a great number of patients to Matlock, and in caſes where medicine had not the leaſt proſpect of being ſerviceable; all of whom have had perfect and laſting cures; and I may with truth declare, I have not failed in one inſtance. However contrary to the opinion of ſome my practice may be, I have, after repeated trials, found,

that

that in many cafes much advantage has been gained by the adminiftration of medicines in conjunction with the courfe of water drinking; being well-timed, fo as to act in an uniform manner, they had excellent effects, the water being greatly affifted in its operation.

As for the bath (if I may be allowed the expreffion) it is the coldeft hot bath of any I know in Europe; and, from its temperature, it may with propriety be ufed either as a cold or hot bath. I am informed that Mr Archwright is going to build hot and vapour-baths at Crawford; if that fpirited gentleman executes his plan, Matlock will be one of the moft complete places of refort we have in England, as baths of fuch a nature will render the waters ufeful in almoft every diforder.

I have, when I have been at Matlock, lamented the want of a proper perfon to regulate the patients as to the courfe they ought to purfue. Humanity has induced me to interfere with fome who came there for health, and were evidently deftroying what they wifhed to preferve.

At the requeft of many of my good friends, I have refolved to take upon me the medical direction of Matlock water the enfuing fummer.

This

This will be both hazardous and expenſive, as I ſhall make a point of having every thing upon the ſpot which may in the leaſt aſſiſt the waters in their operation. Beſides this, my removal for ſo many months from my ſituation, at preſent ſo deſirable, muſt deprive me of the ſociety of many valuable and agreeable friends; yet I think the good it may produce, will overbalance every other conſideration. It has been my opinion through life, that private intereſt ſhould always give way to public good.

I can promiſe myſelf nothing, unleſs I am ſupported by the Phyſicians and Gentlemen of the Faculty; it is through them alone I can be furniſhed with a ſufficient number of caſes, and from ſuch caſes can I do that juſtice to the waters which they merit. Should I be ſo lucky as to meet with this ſupport, I pledge myſelf to publiſh regularly every caſe worthy publication; but not till ſuch time as I have had ſufficient experience to authenticate what ſhall be publiſhed.

I perfectly agree with Dr Percival, that a larger quantity of Matlock water may be drunk at a time, than of any other mineral water I am acquainted with, owing to the entire abſence of any mineral ſpirit; yet it is always adviſable to begin

begin with ſmall quantities. From the want of mineral ſpirit, it is leſs apt to throw the circulation of the blood into irregularities, or quicken the pulſe; and, therefore, it muſt have the preference to Briſtol water in the phthiſis pulmonalis, hæmoptoe, diabetes, fluor albus, *&c.* In all theſe, I have experienced the moſt happy effects from it, as well as in hectic and low fevers, in hyſteric and hypochondriac affections, in a profluvium or deficiency of the catamenia, in bilious diſorders, in conſtitutions debilitated by long and ſevere vernal and autumnal intermittents, in diſorders ariſing from long reſidence in hot climates, in broken conſtitutions brought on by hard and habitual drinking, and in weak or depraved appetites. I intend to reſide conſtantly at the hall in Matlock, from the beginning of June till the latter end of September, or longer; but this muſt depend upon the company that is there.

* * * *

In the month of March 1778, Dr Clarke of Jamaica, in a botanical excurſion, after two days and a half of a laborious aſcent, reached the ſummit of the Blue Mountain Peak, where no human foot had ever trode, and which had before

fore been confidered as inacceffible. De Luc's portable barometer from 30. 2. where it is almoft ftationary at the level of the fea, the mercury in the thermometer, pointing at the time of obfervation (10. A. M.) to 85, fell at noon at the fummit to 23. 3. while the thermometer ftood at 60 In Auguft following, Dr Clarke flept two nights in a hut on the fame fpot, when the range of the thermometer was from a little above 47. at day-break, to fomewhat more than 58. at noon. Though this mountain has much of the volcano appearance, no traces of lava, or a crater, were difcovered. It was found to be fhaded with wood to the very top, and the ground and trees covered to a great thicknefs with the moffes common in Europe. He has lately difcovered immenfe collections of corallines, and of loofe and petrified fea-fhells, at places from 1090 to 3000 feet above the level of the fea. This feems to contradict the commonly received opinion, that the chain of Weft India iflands was once connected to the continent. A friend of Dr Clarke's, Mr Alexander Roberts, has lately found a fpecies of the Cinchona with racemofe flowers, very fimilar to thefe of the Cinchona Caribæa of Jaquin and Linnæus, and

to

to the Cinchona Jamaicenſis of Dr Wright. It is however a better aſtringent bark, and is difficultly diſtinguiſhed from the Peruvian. A trial has been made with the powder of this bark, in doſes of half a dram, on a negro labouring under a ſevere and regular tertian, which it perfectly cured.

* * * *

A building has lately been begun at Edinburgh, for the uſe of the Public Diſpenſary at that place. Below the foundation-ſtone was depoſited a medal, on which was engraved a figure of the Goddeſs of Health, with the words *Salus Publica* for a legend; and, on the reverſe was the following inſcription; *Valetudinarium Edinburgenum, conditum anno poſt Chriſt. nat.* 1780. The expence of this building is defrayed by voluntary contributions; and from the advantages of which the charity has been already productive, there is every reaſon to hope that it will meet with the encouragement it deſerves. The Diſpenſary of Edinburgh has not only afforded relief to thouſands ſubjected at once to poverty and diſeaſe, but has alſo furniſhed to the ſtudents at that place, an opportunity of learning, by experiment and example, the moſt proper

 practice

practice in those diseases which cannot, with propriety, be admitted into an hospital. It is therefore hoped, that the present undertaking, which is calculated to give permanence to this institution, and to furnish it with advantages which it has not hitherto enjoyed, may be promoted, not only by the inhabitants of Edinburgh, but also by others who wish to encourage medical education, or the improvement of the healing art.

* * * *

On Thursday the 26th of October, Dr Duncan will begin at Edinburgh his course of Lectures on the Theory and Practice of Medicine; and on Saturday the 28th of October, he will begin his Winter Course of Case-Lectures. Each Course continues for about six months: The fee for a first Course is Two Guineas; for a second, One Guinea; after which, the Pupils become perpetual, without any further fee, excepting half a guinea in name of medicine-money, for the benefit of the Dispensary, when they attend the Case-Lectures.

* * * *

A new edition of the Works of the late Alexander Monro, Professor of Anatomy in the university

versity of Edinburgh, is at present in the press. This publication is superintended by his son, the present Professor of Anatomy at Edinburgh. It will consist of one volume in quarto. In this will be collected his whole works which have been already printed, with additions and corrections from his own manuscripts, and notes by his son. But, besides these, it will contain also some papers which he left in manuscript, and which have never hitherto been published. His Comparative Anatomy, which, during his life-time, was only surreptitiously published by one of his pupils, will now appear in a more accurate and extensive form.

* * * *

A new work in Midwifery, by Mr Alexander Hamilton, surgeon in Edinburgh, is also in the press. This work is principally intended for the use of female practitioners, and is calculated to afford plain and simple directions for the management of a variety of female complaints, as well as cases in midwifery. In this view, it must be a valuable acquisition. For there are few books designed for the use of women in any language; and the only publications in the English language that can fall into their hands, which

do not abound with ſuch technical terms as muſt render them unintelligible, contain none of the late valuable improvements in the art. If this publication ſhall have the effect of removing any of theſe numerous prejudices, by which many of the female practitioners are influenced, and of awakening their fears, when it is neceſſary that recourſe ſhould be had to ſuperior ſkill, it may be productive of the moſt valuable ſervices to the community.

* * * *

Although the following paper will probably ſoon fall into the hands of ſome of our readers through the channel of the Philoſophical Tranſactions, yet we flatter ourſelves it will not be diſagreeable to many of them, that we employ a few pages in communicating early intelligence of what promiſes to be an important diſcovery.

To the Right Honourable the Earl of STAMFORD, *Preſident of the Agriculture Society at Mancheſter.*

MY LORD,

THE following account of a new method of making pot-aſh was lately read before the Royal Society, and will be inſerted in the next publication

cation of that learned body. But as the diſcovery is highly intereſting to the farmer, and the Philoſophical Tranſactions are in few hands, I take the liberty of communicating it to the Agriculture Society.

I have the honour to be,

My Lord,

Your Lordſhip's moſt humble Servant,

THOMAS PERCIVAL.

Mancheſter, April 19. 1780.

An Account *of a new and cheap Method of preparing* POT-ASHES; *with Obſervations.*

THE Agriculture Society at Mancheſter have long recommended the making of reſervoirs for the water which flows from dunghills in farmyards. This water is ſtrongly impregnated with the ſalts and putrid matter of the dunghill; and by ſtagnation, it acquires a much greater degree of putreſcency, and probably becomes proportionably more replete with ſalts. When thus collected and improved, it is pumped into an hogſhead, which being drawn upon a ſledge or ſmall cart, is conveyed into the meadows, for the purpoſe of ſprinkling them with this rich manure.

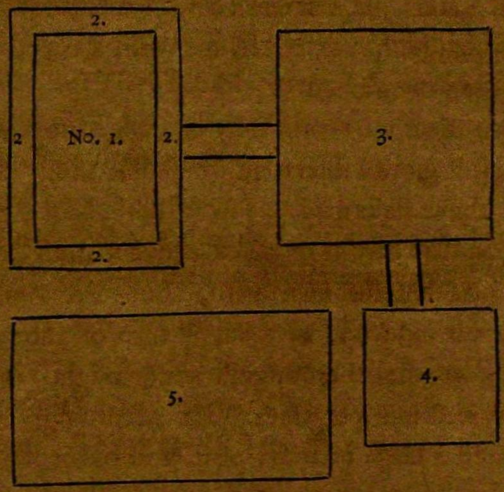
manure. This important improvement in rural œconomy, I apprehend, has not been extended much beyond the diſtrict of our Society; and it ſeems to be unknown to one of the lateſt and moſt intelligent writers on huſbandry. For Lord Kaims, in a recent work on this ſubject, of which he has favoured me with a copy, has not even mentioned it.

But theſe reſervoirs may be applied to a purpoſe ſtill more ſubſervient to public utility than that above deſcribed. Joſiah Birch, Eſq; a gentleman who carries on an extenſive manufactory, and bleaches his own yarn, about ſix months ago, was induced, by a happy turn of thought, to try whether the dunghill water might not be converted into pot-aſhes. He accordingly evaporated a large quantity of it, and burnt the reſiduum in an oven; the product of which ſo perfectly anſwered his expectations, that he has ever ſince continued to prepare theſe aſhes, and to employ them in the proceſs of bucking. A ſtranger to that narrowneſs of ſpirit, which ſeeks the concealment of a lucrative diſcovery, he is deſirous that it ſhould be communicated to the Royal Society, and has furniſhed me with the following

following account, together with the plan annexed *.

" The quantity of muck-water used, was " twenty-four wine-pipes full; which employed

 " a

* 

" No. 1. The dunghill.

" 2. A fough, or drain, round the bottom of the " dunghill.

" 3. A hole, or pit, to receive the muck-water from " No. 1.

" 4. A well to receive the muck-water from the " pit, wherein a pump is fixed to convey it to the pan, " No. 5. in which it is boiled to the confiftence of treacle, " and afterwards burned in an oven. The pan, No. 5. is " formed at the bottom of iron plates, and turned up a little " round the edges, to which deal-planks are fcrewed, fo " as to make it about twenty inches in depth."

" a man and two horſes two days, to cart it " from the pump to the pan wherein it was " boiled: But this expence I ſhall now ſave, as " I ſhall lay a ſough of brick, which will convey " it from the pump to the boiler. The coals " uſed to boil and burn it, were one hundred " and twenty baſkets; and I ſuppoſe each baſ- " ket weighs ſix ſcore pounds, or upwards. " One man was occupied three weeks in boil- " ing and burning. The quantity of aſhes " made, was 9 Cwt. 1 Q. 12 lb.; well worth, " at the preſent price of aſhes here, two gui- " neas *per* hundred.

" 9 Cwt. 1 Q. 12 lb. at 42 s. *per* " Cwt. - -			L. 19 13 0
" A man and two horſes " two days, at 6 s.	L. 0 12 0		
" 120 baſkets of coals, at " 5 d. *per* baſket, -	2 10 0		
" A man's wages for three " weeks, -	1 7 0		
			L. 4 9 0
			L. 15 4 0

" The gain therefore amounts to L. 15, 4 s. " deducting only a trifle for the wear of the " pan and oven."

The

The profits arifing from this preparation of pot-afh, are fufficiently evinced by the foregoing eftimate; and they may, perhaps, admit of increafe by future improvements. In the fpring and fummer feafons, I fhould fuppofe, the evaporation might be carried on without the aid of fire; by conveying the dunghill water from the refervoir, through proper fluices, into fhallow troughs or ponds, of fuch extent as to afford a fufficient furface for the action of the fun and wind *. Thefe might be covered in rainy weather

* The following abridged view of a meteorological regifter, which I kept with great exactnefs during the years 1774 and 1775, may throw fome light on the practicability of this plan in the climate of Lancafhire, which, I believe, is nearly the fame as that of moft of the other weftern counties of England.

1774.					1775.			
	Thermometer				Thermometer			
Months.	2 o'clock P. M.		Days.		2 o'clock P.M.		Days.	
	higheft.	loweft	rainy.	dry.	higheft.	loweft	rainy.	dry.
Jan. Feb. Mar.	56	28	25	65	54	30	61	29
Apr. May, June	72	45	55	36	78	51	42	49
July, Aug. Sep.	75	53	66	26	74	48	62	30
Oct. Nov. Dec.	60	30	43	49	64	32	50	28†
	52,	25	189	176	55,	7	215	136
	Mean heat.				Mean heat.			

† 14 days omitted; no account being taken.

The

ther with awnings of canvas, painted on the outside black, and white on the inside; the former with a view to abforb, the latter to reflect the rays of light.

This pot-afh is of a greyifh white appearance, deliquefces a little in moift air, but if kept in a dry room near the fire, acquires a powdery furface. It is hard, and of a fpongy texture when broken, with many fmall cryftals in its fubftance. The colour of its internal parts is dufky, and variegated. To the tafte, it is acrid, faline, and fulphureous. It emits no fmell of volatile alkali either in a folid form, diffolved, or when added to lime-water; neither does it communicate the fapphire colour to a folution of blue vitriol. Silver is quickly tinged black by it; a proof that it contains much phlogifton. Ten grains of this pot-afh required eleven drops of the weak fpirit of vitriol to faturate them: the like quantity of falt

The Thermometer was made by Dollond, and graduated according to the fcale of Fahrenheit. It was placed in the open air, and in a northern expofure. The column of rainy days expreffes the *leaft* as well as the *greateft* quantity of rain; the column of dry includes only thofe days in which not a fingle fhower was noticed. The day comprehends twenty-four hours. About thirty-three inches of rain, at a medium, fall yearly in Manchefter.

falt of tartar required, of the fame acid, twenty-four drops. A ftrong effervefcence occurred in both mixtures: from the former, a fulphureous vapour was exhaled. A tea fpoonful of the fyrup of violets, diluted with an ounce of water, was changed into a bright green colour by five grains of the falt of tartar; but ten grains of this new pot-afh were neceffary to produce the fame hue in a fimilar mixture. Half an ounce of the pot-afh diffolved entirely in half a pint of hot water; but when the liquor was cold, a large purple fediment fubfided to the bottom: and it was found, that this fediment amounted to about two thirds of the whole quantity of afhes ufed.

I have not leifure at prefent to profecute thefe experiments farther; and fhall therefore content myfelf with making a few general obfervations on the facts which have been advanced.

1. This pot-afh is a true fixed vegetable alkali, and a product of putrefaction which has not, that I recollect, been noticed by the chemifts. A very celebrated writer has even in exprefs terms afferted, that "all vegetables, not excepting "thofe which in their natural ftate furnifh afhes "containing much fixed alkali, when burnt, after their acid has been altered by a complete "putrefaction,

"putrefaction, leave aſhes entirely free from al-
"kali *."

2. The quantity of alkali contained in this pot-aſh may, with ſome probability, be eſtimated at about one-third of its weight; whereas the white Muſcovy aſhes are ſaid to yield only one-eighth part †. Of its impurities, ſulphur is the moſt injurious to its bleaching powers, and ſhould, in the preparation of it, be carefully ſeparated. A longer-continued and more gentle calcination, in a furnace ſupplied with a ſufficient current of air, might perhaps anſwer this end. But the moſt effectual method would be to lixiviate the ſalts with pure water, after a moderate fuſion, and then to evaporate them ſlowly to dryneſs. It muſt however be remarked, that in thus freeing the pot-aſh from phlogiſtic matter, another impurity is generated. For both the action of fire, and the ſolution in water, convert into earth a portion of the alkaline ſalt.

3. No quick-lime appears to be contained in this pot-aſh: For a ſolution of it, poured from its ſediment, remained clear, though long expoſed

* Macquer's Dictionary of Chemiſtry, Article *Alkali.*

† Home on Bleaching, page 157.

fed to the air. Nor did it acquire any milkinefs by being blown into from the lungs. But perhaps the addition of this cauftic fubftance, in a due proportion, would increafe its activity and value, when employed in many of the arts. For the Ruffian pot-afh is more pungent to the tafte, faturates a larger proportion of acid, and diffolves oils more powerfully, than the purer alkaline falts. And Dr Home has proved *, that thefe qualities depend on a large admixture of quick-lime.

4. It would be worthy of trial, to afcertain whether the large purple fediment, which fubfides when this pot-afh is lixiviated, might not be applied to the manufacture of Pruffian blue, or ufed in the manner recommended by Mr Macquer, for dying wool and filk. See the Memoirs of the French Academy for the year 1749 †.

5. The farmer, though he live at a diftance from the manufactures in which pot-afh is employed, may find his account in preparing it from dunghill water. For it will furnifh him with a top-dreffing

* Effay on Bleaching. Neumann's Chemiftry, by Lewis.

† See alfo Neumann's Chemiftry, by Lewis.

top-dreſſing for his garden and land, of great fertilizing powers. But if fuel be dear where he reſides, and neceſſaries wanting for the conſtruction of a furnace, the ſimple evaporation of the water may ſuffice. And the putrid lye, thus reduced to a ſolid form, will prove to be a rich manure. At Hart-hill, my ſummer abode, about three miles from Mancheſter, I have lately practiſed a method of making a compoſt of dunghill water. The weeds and rakings of the garden, the dreſſings of the fields, the leaves blown from the trees, and other refuſe matters, are put together near the reſervoir; out of which the water is occaſionally pumped, and ſcattered over the heap. So ſtrong a ferment almoſt inſtantly excites putrefaction; and theſe vegetable ſubſtances are ſoon converted into a fertile mould, which, retaining the ſalts and oils of the dunghill water, ſuffers the ſuperfluous moiſture to exhale into the air, or to percolate through it. And I have found by experience, that the compoſt, thus prepared, is laid on the meadows at leſs expence, and that it is more efficacious and durable in its operation, than the ſprinklings which, at ſtated times, they formerly received. For my land, though good, and in fine condi-

tion,

tion, is light and ſandy; and the dunghill water quickly paſſed below the roots of the vegetables which grow upon its ſurface.

POSTSCRIPT.

It has been ſuggeſted to me, that the foregoing diſcovery has no claim to the patronage of the Agriculture Society, becauſe, in this manufacturing county, it may eventually tend to check the cultivation of land, by robbing it of one ſpecies of manure. But I conceive the operation of it will be entirely the reverſe: For it will promote the collection of every putreſcent article, and thus augment the farmer's dunghill, at the ſame time that it excites a more univerſal attention to the preſervation of muck-water; the reſervoirs for which are yet few, and have been made chiefly by thoſe who follow huſbandry for amuſement, and not as an occupation. The public, therefore, will be gainers both by the ſaving, and by the acquiſition; and a twofold branch of rural œconomy will be eſtabliſhed, at once lucrative to the huſbandman, and important to the artiſt and manufacturer.

But admitting all the ſuppoſed force of the allegation, it muſt ſurely be acknowledged, that the

the main deſign of our inſtitution is to increaſe the productiveneſs of agriculture, by ſtimulating the farmer to every beneficial undertaking conſiſtent with his profeſſion. Now, in this caſe, the *beneficial* is beſt meaſured by the Hudibraſtic ſtandard: for,

"What's the value of a thing,
"But ſo much money as 'twill bring?"

I truſt, therefore, that the Society will not, by declining to patronize the preſent diſcovery, juſtify the ſarcaſm of an ingenious Poet of this place, who has humorouſly charged ſome of us with teaching,

"By crops increas'd, and profits leſs,
"The way t' enrich the nation."

AT a Meeting of the Agriculture Society *held at* Mancheſter, *April* 24. 1780.

RESOLVED, *That a Silver Medal be given to* JOSIAH BIRCH, Eſq; *for the Diſcovery of a new and cheap Method of making Pot-aſh.*

RESOLVED, *That the Thanks of the Society be given to* Dr PERCIVAL, *for his Account of this Diſcovery; and that the ſame be printed for the uſe of the Members.*

The

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The following directions for preventing fatal effects from drinking large quantities of ſpirits, have been printed and diſtributed at Liverpool. They were drawn up by Dr Houlſton of that place, in conſequence of ſome melancholy accidents happening from this cauſe, where proper aſſiſtance was not ſought for. As ſuch accidents are but too common, it is of importance that the moſt ſucceſsful practice in thoſe caſes ſhould be generally known.

Many perſons are deſtroyed ſuddenly by drinking large quantities of ſpirits. Their firſt effects are ſtimulant; they quicken the circulation, and occaſion much blood to be thrown upon the head. They afterwards prove ſedative; they bring on ſtupor; loſs of reaſon, total; of motion and ſenſation, almoſt total. Their effects may be partly owing to their entering, in ſome degree, into the circulation, but depend chiefly, when violent, on their action on the nerves of the ſtomach. In conſequence, the brain is affected, and the nervous influence ſuſpended, if not deſtroyed. All the parts of the body, therefore, partake of this inſenſibility. As the ſkin, in ſome caſes, may be burnt even without feel-

ing, ſo the ſtomach and inteſtines may be ſtimulated conſiderably without any effect. The motion of the heart and lungs is much enfeebled and interrupted, but continues irregularly till death enſues.

To reſcue the perſon from ſo dangerous a ſtate is extremely difficult. To counteract theſe effects by medicine is leſs likely, both as the power of ſwallowing is loſt, and as, probably, little or no abſorption then takes place. But we ought to endeavour, 1*ſt*, to evacuate the poiſon; or elſe, 2*dly*, to dilute it, and thereby weaken its action. With a view to the firſt, briſk vomits may be given; but, from the want of irritability of the ſtomach, theſe often will not act, unleſs given early, when they are of great ſervice in caſes of intoxication. A dock-porter who died from this cauſe in the Liverpool Infirmary, Feb. 28. 1780, got down over night, nearly twelve grains of emetic tartar diſſolved, yet it produced little or no effect, though he lived till the next day. Purges are alſo proper, but liable, though in a leſs degree, to the ſame objections. Sharp glyſters may be adminiſtered, and will produce ſome evacuation, but their operation does not extend far enough. Large

glyſters,

glyfters, of water only, or of water in which purging falts are diffolved, thrown up with fome force by a fyringe, might be of more fervice.

Oil has been advifed to be given, to help to evacuate the fpirit, or to weaken its action.—But when the inactivity of the ftomach is become fo great, and the danger fo preffing, there feems more reafon to expect fuccefs, from largely diluting that poifon, which we in vain attempt to evacuate. When intoxication has been produced by drinking ftrong liquors, large quantities of water, or weak liquids drank, are found to leffen it very confiderably. And though the power of fwallowing be loft, yet by means of a pipe (as a catheter) paffed beyond the glottis, or even down into the ftomach, water might be introduced, in fuch quantity as was judged fufficient to dilute and carry off the liquor in the ftomach. To the water might probably be added, with advantage, vinegar, or any kind of acid; or purgatives might be diffolved in it, to facilitate the poifon's paffing off by the inteftines. A pipe of this kind too, would afford the beft method of introducing fubftances into the ftomach to promote vomiting.

Putting the body into a warm bath, or the legs and feet in warm water, will be of uſe, by leſſening the quantity of blood accumulated in the head, and in the larger veſſels; and ſome of the water may perhaps be abſorbed. With a view to relieve the oppreſſion, bleeding, and opening the temporal artery, are adviſable. If the pulſe is found to become freer and fuller on loſing ſome blood, more may be taken away. Bliſters may alſo be applied with advantage.

The coldneſs of the extremities, and the evident difficulty with which the circulation is kept up, point out the propriety of aſſiſting it by warmth and friction applied to the ſkin (as in recovering drowned perſons). Motion, to prevent ſleep, may probably be ſerviceable in ſuch caſes. Great care ſhould be taken to looſen the neck-band, garters, and every kind of bandage, and that the body ſhould lie in a natural eaſy poſture; on the ſide is perhaps better than on the belly, though that has been recommended, that the ſtomach might the eaſier diſcharge its contents. The breathing ſhould not be obſtructed, nor the neck lie low, or in a bent poſition.

* * * *

The annual prize-medal for the year 1780, given by the Harveian Society of Edinburgh, for the

the encouragement of experimental inquiry, was adjudged to Dr Arthur Broughton, now Phyſician in Briſtol, for his eſſay on the coagulable lymph of the blood. After the delivery of the Harveian Oration for laſt year, the ſubject of which was an account of the life and writings of the late Dr Alexander Monro, the prize was publicly preſented to Dr Broughton by Dr Charles Webſter, one of the Secretaries to the Society, who, on that occaſion, addreſſed the audience in the following terms:

GENTLEMEN,

The object of this annual meeting is not only to commemorate the illuſtrious dead, but to confer the rewards of genius on the living. Eſtabliſhments thus friendly to emulation almoſt univerſally prevail. They have given birth to ſome of the moſt brilliant diſcoveries; the firſt names in philoſophy and the arts have honoured them by their competition; and from them the happieſt effects have redounded to every department of ſcience.

Of the utility of the preſent inſtitution, another proof is now added to thoſe formerly given by a Stevens and a Darwin. The prize for the

queſtion announced laſt year, is adjudged to a gentleman already diſtinguiſhed in the line of experiment. In his review of former teſts between mucous and purulent expectoration, he has diſcovered fallacies hitherto undetected, and pointed out a criterion which appears to be equally ſimple and juſt.

In the preſent eſſay, he has given a clear and conciſe detail of every thing relating to the coagulable lymph of the blood, and a demonſtration of the increaſe of that ſubſtance in inflammatory diſeaſe. He has likewiſe formed ſome probable conjectures of the cauſe of this increaſe, and drawn ſeveral inferences uſeful in the practice of phyſic.

It is therefore with much ſatisfaction I now deliver to him this medal, with the works of the illuſtrious Harvey; and I ſincerely wiſh, that future competitors may do equal honour to the inſtitution.

The ſubject of the blood does not appear to be yet exhauſted. Controverſies reſpecting its parts ſtill ſubſiſt. It is a fluid of ſuch importance in the animal œconomy, that every remaining doubt concerning it muſt be matter of regret.

The

The inquiry, therefore, of this year, is into the nature and ingredients of the ſerum. The ſaline matter which this contains, is ſtill the ſubject of diſpute. Whether its viſcid part be coagulable lymph diſſolved in the ſeroſity, requires demonſtration; and the exiſtence of mucus in it, does not ſeem to be aſcertained. Cloſely connected with this inveſtigation, is the theory of purulence. The experiments of Pringle and Gaber have of late been much controverted: ſo that, in every view, the field for inquiry is conſiderable; and will, I hope, fully repay the labour beſtowed.

No arguments, ſurely, are neceſſary at this day to recommend experimental purſuit. No one is now ignorant, that it is the only road to genuine ſcience; and that nothing is entitled to the denomination of philoſophy, which reſts not on this foundation. Had it not been that taſte for experiment, ſo happily introduced by the immortal Bacon, and ſince ſo ſucceſsfully cultivated, we might have ſtill been dragging the car of Ariſtotle, ſtill toiling in the trammels of the ſchools.

Though even random experiment may have ſometimes ſtruck out truths of moment, yet a

 fund

fund of knowledge, and a collected attention, are certainly the fureft guides, not only to bare difcovery, but to principles of extenfive application. The leaves of trees had been falling unheeded from the beginning of the world: it was the attentive eye and comprehenfive mind of Newton alone that could feize this common appearance, and from it explain the conftitution of the univerfe.

Indeed the very habit of experiment tends to awaken and improve thofe faculties of the mind on which fuccefs moft generally depends. It begets attention, rivets knowledge, and expands the powers of comprehenfion.

Allow me then, Gentlemen, to recommend fuch purfuits to your zealous regard. They are peculiarly adapted to that quicknefs of perception, which thofe of your years fo commonly enjoy. Once begun, they will recommend themfelves to your own feelings. By no other method can you more effectually ferve the interefts of humanity and your profeffion; by none fo affuredly hope for the reputation of a Harvey or a Monro.

The

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The following extracts are made from the Programme de la Societé Hollandoise des Sciences, etablié à Harlem, for the year 1780.

As some philosophers are of opinion, that the elastic fluids which penetrate different bodies in one way or another, are so many different species of air, while others are of an opposite opinion; and as it is of importance to determine this point, the Society proposes the following question.

Quelles sont les espèces vraiment differentes des fluides, qui paroissent être de l'air, auxquelles on a donné les noms "d'air fixé, air dephlogisté, air inflammable, air nitreux, air acide, "air alkalin, *&c.*?" Quelles sont leurs differences reciproques, et en quoi different-ils de l'air atmospherique? 2. Chacun de ces espèces de fluides elastiques, a-t-elle assez de rapport avec l'air de l'atmosphere, pour qu'on la puisse croire une espèce d'air? 3. Jusqu'à quel point peut-on determiner "la nature de l'air atmospherique" par les experiences et les observations faites avec ces fluides?

Memoirs on this subject must be transmitted to the Society by the first of January 1782.

By

By the ſame period alſo, the Society requires that diſſertations ſhould be tranſmitted to them on the following ſubject.

Quels ſont les objets de l'Hiſtoire Naturelle des Provinces Uniës, au ſujet desſquels on ait lieu de ſe flatter, que des recherches plus exactes pourront procurer quelque utilité à notre Patrie et à la Societé humaine?

Anſwers to the following queſtion are expected by the beginning of the year 1784.

Eſt-il, outre le Caffé, le Sucre, le Cacao, et le Coton, quelques autres Plantes, Arbres ou Vegetaux, qui puiſſent être cultivés dans nos Colonies des Indes Occidentales, et qui ſoient propres à ſervir d'aliments, ou d'un uſage utile pour les Manufactures et les Fabriques de ce Païs? Les Eſſais, qu'on a fait, il y a quelques années ſur "l'Indigo," ont prouvé que ſa culture nuit à la Santé des Nigres; mais en a-t-on fait, ou pourroit-on en faire ſur d'autres Vegetaux, et quels ſont-ils?

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The following experiments made by Mr John Scott, chemiſt in Edinburgh, point out a new method of combining ſome metallic ſubſtances with

with the acetous acid, by means of double elective attraction.

EXPERIMENT I.

To a weak ſolution of mercury in the nitrous acid was added a ſolution of regenerated tartar. A very beautiful pearl-coloured precipitate immediately fell to the bottom. This precipitate is a combination of mercury with the acetous acid. This experiment has a very amuſing appearance, as the precipitated mercurial ſalt is exactly like pearls in coarſe powder; which appearance it does not loſe if dried with care.

In this experiment, the nitrous acid leaves the mercury to unite with the fixed alkali in the regenerated tartar; while the acetous acid and mercury, left at liberty, unite together.

The acetous mercurial ſalt is not ſo diſagreeable to the taſte as the other ſaline preparations of mercury, and probably may be more agreeable to the ſtomach. Mr Scott has often uſed it with ſucceſs in venereal caſes as an alterative. A large proportion of water is required to diſſolve it. This method of combining mercury with the acetous acid, is, in Mr Scott's opinion, much more eaſy than that recommended by Mr Macquer,

Macquer, of firſt diſſolving the mercury in the nitrous acid, then precipitating it with a fixed alkali, and afterwards boiling the precipitate in vinegar. A ſolution of ſugar of lead may be uſed inſtead of regenerated tartar, but for medicinal uſe the latter is preferable.

EXPERIMENT II.

A ſolution of biſmuth in the nitrous acid produced a precipitate nearly reſembling that of mercury, when mixed with a ſolution of regenerated tartar.

EXPERIMENT III.

A ſolution of ſilver, when added either to a ſolution of regenerated tartar or ſugar of lead, produced an appearance of the ſame kind; but with this difference, the lunar ſalt reſembled ſmall needles, while the other two appeared as ſmall ſhining pearl-plates.

EXPERIMENT IV.

When a ſolution of tin in aqua fortis was added to a ſolution of regenerated tartar, a large quantity of a ſhining precipitate fell down, which was the tin combined with the acetous acid.

This

This method of making the ſalt of tin with the acetous acid, is much eaſier than the tedious and expenſive proceſs recommended by Dr Lewis in the new Diſpenſatory.

Experiment V.

When a ſolution of gold was mixed with a ſolution of regenerated tartar, no change was produced or precipitation formed, owing to the ſolar acetous ſalt being very ſoluble in water.

Theſe experiments Mr Scott has been in the practice of ſhewing in his courſe of Pharmacy for ſeveral years paſt.

* * * *

On the 23d of September 1780, died Mr John Williamſon, principal Gardener in the Botanical Garden of Edinburgh. Great knowledge of his profeſſion, ſingular diligence, and amiable manners, made his death univerſally regretted, and conſidered as a public loſs.

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Dr Charles Webſter of Edinburgh, has lately been elected a member of the Royal Society of Medicine of Paris.

* * * *

The whole Works of the late Dr Alexander Monro, collected in one volume, which we mentioned

tioned formerly, is now nearly printed off, and will be publiſhed in a few weeks. This work not only contains corrections and enlargements of the former publications in many different places, but alſo ſeveral papers which have never before been publiſhed. Beſides copperplates illuſtrating inſtruments, morbid appearances, *&c.* it will be adorned with an elegantly engraved head of the author, by Mr Baſſire of London, from a painting by Allan Ramſay, Eſq.

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Dr Matthew Dobſon, well known to the learned world by many uſeful and ingenious publications, after having, for the ſpace of near 20 years, practiſed medicine at Liverpool with great reputation and ſucceſs, has removed from thence to the city of Bath.

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The following extract of a letter to Dr Duncan, from Patrick Wilſon, M. A. ſon to Dr Wilſon, Profeſſor of Aſtronomy in the univerſity of Glaſgow, gives a remarkable inſtance of the inſtinct of a dog.

Having juſt now ſome leiſure time, I ſit down to give you an account of a *ſelf-preſerving inſtinct*

ſtinct in the caſe of a dog, which perhaps may be thought remarkable. He is of a breed between the rough water ſpaniel and the common pointer; very docile and ſagacious; has dark brown curled hair, long ſhaggy ears, and a fine nap, and was then about three years and a half old.

Nothing ſeemed to ail him, till one night, after the family were in bed, he was heard very reſtleſs in the ſtair-caſe, and making an inceſſant noiſe, as if trying to force up ſomething from his ſtomach or throat. When he had gone on in this way for near an hour, I heard my brother, who ſlept in the firſt floor, open his room-door and go down to the kitchen to ſee what was the matter. After ſtaying ſome time, he returned and called to me, that he could not imagine what ailed the beaſt, but that he ſeemed to be very bad. Not long after, the dog came up ſtairs again, making the ſame noiſe as before, but louder, and more frequently. Upon his return down again, I got up and followed him with a lighted candle to the kitchen, where at firſt he ſeemed to ſhun me by going into a dark cloſet, and lying down upon ſome old cloaths. In this ſituation I found him upon

looking

looking in, and I ſaw too that his eyes were inflamed and watery. He alſo foamed a little at the under jaw, and ſtruggled with a continued panting and ſuppreſſed cough; and he uſed his tongue perpetually as if lapping at ſome food or drink.

The ſervant acquainting me, that when my brother was down he had offered the dog water, and then milk, without his minding either; I imagined he had got a chicken or fiſh-bone in his throat; and, from this view, I got him ſome hard toaſted oaten cakes, thinking, that on his ſwallowing ſome morſels of it the bone might be carried down. After taking two or three pieces voraciouſly, he got to his feet, and run ſtraight to the grate, under which he ſnuffed greedily among the aſhes, and, to my aſtoniſhment, licked up and ſwallowed all the ſmall cinders he could find by the candle light, and then gropped buſily with his paws for a new ſupply.

I was much at a loſs what to think of this ſtrange ſort of appetite, and believed that the creature, who all the while ſeemed quite indifferent and inſenſible to every thing about him, was impelled by mere anguiſh and diſtraction. But continuing to look at him attentively, I at laſt

laſt ſuſpected, that what he was employed about fell ſomehow or other within the range of his inſtinct. Upon obſerving that now and then he ſhaked his tail, I now left him and went to bed, when preſently he began his wanderings again. He made the ſame noiſe as before, and far louder, at one time uttering a bellow very nearly as loud as a bull. Soon after this, being two hours paſt midnight, he became quieter, and in a little was no more heard.

In the morning we expected to have found him dead; but, about half paſt eight, he came down from one of his couches in the garret ſeemingly quite well. What was now diſcovered ſtrewed in many places of the low paſſage, and in the ſtair-caſe, ſufficiently explained the wonder of his ſwallowing the cinders. It was a matter which conſiſted of ſhort hair, and which had every mark of having been voided in the way of excrement; and in the middle of every nodule there was found a cinder. When this ſtuff was put altogether, it was nearly as large as one's two fiſts; and, before the creature had taken the ſtrong doſe above mentioned, it had probably lain in the ſtomach as an entire lump, which would neither be diſgorged nor puſhed downwards.

downwards. Upon his following my brother to the garden before breakfaſt, he purſued his cure, by eating very greedily of any kind of graſs he could find, and became perfectly well.

This happened at the time of the year when the country people firſt bring in the hares to town. Our own ſervants had often remarked, that the dog was voraciouſly fond of the freſh bloody ſkins; and, for that reaſon, were commonly careful to put them out of his way. But, on this occaſion, there is room for believing, that either in our own back ground, or in that of ſome of our neighbours, he had made a haſty meal of this ſort, and ſwallowed the ſkin with the hair upon it. I may alſo mention, that when my brother firſt went down, he obſerved much the ſame appearances as thoſe I have deſcribed; and alſo that he then greedily licked up the cinders.

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The following remarks on the Sigaultian Operation, are extracted from a letter to Dr Duncan, by Dr J. H. Myers of London, written from Paris.

I quitted England with every poſſible prejudice againſt this operation, from the influence the

the opinion of my teachers had on me. But I am at prefent "nullius addictus jurare in verba "magiftri." I have feen the operation twice performed with every poffible fuccefs. The laft patient, while I write, is in the room, coming to fhew herfelf in juftice to her operator. It is only eighteen days fince the operation was performed, and fhe is in perfect health, by no means injured by the operation. Her former child was extracted by the forceps, the impoffibility of her being delivered in the natural way was agreed on in the prefence of feveral ingenious men in the medical line. The child was delivered by means of this operation, and we were forry to find, dead; the umbilical cord was twice twifted round the neck of the fœtus; and that part which was round the neck was white, and had the appearance of a ligament, the blood being regurgitated in that part of the cord towards the child. The child's face was extremely red, and it is probable, from the efforts the fœtus muft have made, that it died apoplectic. This you will evidently obferve depended not on the operation, but happens every day in natural deliveries.

Where there is a phyfical impoffibility to deliver a woman naturally, the obftetrical art has only offered us, till this ingenious difcovery, the Cæfarean operation. In fpite of the fuccefs this operation has met with, the greateft advocates for it cannot but acknowledge the misfortunes that have almoft always attended the wretched that have had the courage to fubmit to it; thefe dangers alone have been fufficient to intimidate the moft fkilful hand: How little furprifing is it then, fo few are willing to fubmit to it, confidering how few practitioners will venture to undertake it? In thefe circumftances, the manœuvres ufed, the inftrument being even in the hand of the moft fkilful, tend only to kill the child *dans le corps d'une femme vivante*, to extract it with violence, or to bring it away piecemeal, after having expofed the mother (if fhe yet exifts) to the moft horrid torments, as well as the moft mortifying difappointment. From fuch dreadful circumftances, and from the want of an operation better calculated to meet with fuccefs, the country has been deprived of many a fubject, and many a family of their only hopes. How ufeful, then, fuch an operation, which tends to alleviate thefe misfortunes? How valuable

able ſuch a man, who, by application and genius, diſcovers the means to render mankind leſs miſerable, and adds to the riches of his country, by the preſervation of individuals?

I ſhall attempt to deſcribe to you, as clear as I am able, the method of performing this operation, as practiſed by the inventor. The woman being placed in ſuch a poſition as is convenient, and other neceſſary precautions being taken, the common teguments of the abdomen, above the pubis, muſt be ſtretched by means of the thumb and finger of the left hand; the diſſection is then made with the other, by means of an inſtrument much like our ſcalpel. The common teguments and adeps being cut from the ſuperior part of the ſymphyſis, "uſque ad "magnorum commiſſuram labiorum pudendo-"rum," an operation by no means very painful, the ſymphyſis then becomes expoſed. A ſcalpel ſomewhat lenticular, is then to be made uſe of, after the diviſion of the pyramidal muſcles and linea alba. Into this aperture, the *index* of the left hand is to be introduced, and the ſection of the ligament and cartilage is to be continued: The moment the diviſion is made, there is an enlargement of the pelvis, I venture to ſay,

to any extent desired; the last I saw was three inches, accurately measured by an instrument called *pelvimetre*, contrived by Mr Trainel.

The child presenting the head, the delivery happens in an instant, with such quickness, that it resembles an explosion: The child presenting in any other manner, the feet are to be sought for in the ordinary way, directing always the great diameter of the head towards the great diameter of the bason. The wound is then to be filled with tow, and covered with a narrow four-fold bandage. This is fixed by a large piece of linen fastened about the groin, with small bandages cut from the same, or sewed to it, to keep it tight. The ends of this piece of linen are to be divided, crossed over the symphysis, to form what is called by surgeons here, *le bandage unissant;* the patient's linen is to be changed, and she is to be put to bed, well furnished with napkins doubled, and lint, *&c.* to absorb the moisture; these may be removed or renewed without inconvenience; a hollow is to be made in the bed, where the linen is placed, to correspond with the bason; a slight bandage is to be passed crossways about the knees, at a proper distance, to prevent their separation; the head and back

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are to be ſomewhat raiſed by pillows that do not yield too much. In the following dreſſings, the greateſt cleanlineſs is to be obſerved: To prevent any clot of blood remaining in the wound, it is to be ſyringed two or three times; nothing elſe is to be uſed for the cure of the wound, but a pledget dipped *daily* into the whites of eggs, beat up with brandy. A proper attention to regimen, in the largeſt ſenſe, is neceſſary. Glyſters are to be given occaſionally. The mother may nurſe her child. With theſe, and other neceſſary attentions, the patient may be taken out of bed at the end of a fortnight, the union being then generally completed.

The length of the inciſion does not exceed three inches, and the operation does not laſt five minutes. Compare that with the cruelty of the Cæſarean operation, a wound of above nine inches, the viſcera uncovered; in ſhort, the more I reflect, the more I congratulate myſelf in the happineſs of having been eye-witneſs of one and the other. On the continent, this operation has been tried with equal ſucceſs, at different places: At Mons three or four times; by Dr Camper, in Holland, once or twice. Several others have alſo performed this operation with every ſucceſs

 poſſible.

poſſible. I hope it will ſoon be tried in Britain, where the ſpirit of emulation, and the deſire of ſerving ſociety, is ſo remarkable. The inſtance I mentioned to you in my laſt, of a wretch, not thirty inches high, producing a child of twenty inches, by means of this operation, leaves no doubt of the poſſibility of delivering a woman in any circumſtance.

The diſſection of this woman, who died of a gangrene in the region of the ileum, diſcovered the amazing mal-conformation of the pelvis, which I meaſured, and is ſtill in the poſſeſſion of Dr Sigault. That the head of a child ſhould have paſſed a baſon not two inches diameter, and otherwiſe horridly deformed, without any laceration being produced, or the ſlighteſt mark of contuſion on the cranium, or the leaſt force being uſed, compared with the force uſed by *accoucheurs*, in delivering by means of the feet, or by means of the forceps, is a diſcovery no leſs ſurpriſing than important.

This is then the idea to be formed of this delivery. A mother ſo prodigiouſly deformed, as always to be obliged to uſe crutches, bent almoſt double, carries a child of two thirds her ſize. The diſtenſion of the uterus muſt have been amazing,

amazing, and the mal-conformation of the left ſide of the baſon muſt have been the cauſe of the pains ſhe felt before delivery, and the cauſe of her death. The child being ſtrongly compreſſed on all ſides, ſcarcely could vegetate in the uterus, which might have contributed to its death. On the whole, I think this ſubject proves ſufficiently to what extent the advantages of this operation may be carried. I think, nature, in ſome meaſure, marks the way to this operation, ſince, in difficult deliveries, there often happens a relaxation of the teguments of the pelvis, and even ſometimes a laceration.

The *objects* of this operation are, to augment the capacity of the pelvis, in the enlargement of its circle; to procure *un ecartement* of the os pubis, in dividing the ſymphyſis that unites them; to procure to the fœtus a ſpace ſufficient for its paſſage; to mitigate the cruel pains of the mother, and to preſerve the life of one and the other; objects, I think, of the utmoſt importance.

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The following account of ſome experiments, made by the late ingenious Mr Buquet of Paris, on a celebrated quack medicine ſold in that city, are

are extracted from a letter written to Dr Duncan, from Paris, by Dr Dennis Ryan.

As you may not have already ſeen it, I ſhall ſend you an extract from a ſmall publication, which has been given out here ſome time ago, by Mr Buquet, Doctor of the Faculty, and Profeſſor of Chemiſtry at the ſchool of medicine, juſtly remarkable for uncommon merit. It contains the ſubſtance of his opinion, and that of Monſ. d'Arcet, Profeſſor of Chemiſtry at the Royal College, with reſpect to a quack medicine, called Rob Antiſyphilitique, with which the inventor, Sieur l'Affecteur, boaſted he could cure the moſt inveterate venereal caſes, without having employed a grain of mercury.

Monſ. Poſſonier, late Profeſſor of the practice in the Royal College, and Doctor of the Faculty, was appointed by the Royal Society to attend to the effects of this medicine. Obſerving that the moſt violent venereal ſymptoms diſappeared from its uſe, he ſuſpected that it muſt have contained ſome mercury. In order to be ſet right in this ſuſpicion, he gave a bottle of it to be examined by Mr Buquet.

This able chemiſt obſerved, that in ſmell and taſte it reſembled honey, charged with the ex-

tract

tract of some plants. To determine its constituent parts, he made the following trials.

1st, He exposed it to the action of fire in a close vessel; the residuum caused no whiteness on the surface of gold on which it was rubbed.

2dly, Mixed with lixivium of salt of tartar, or a solution of volatile alkali, it yielded no mercurial precipitate.

3dly, After adding to it some drops of aqua fortis, he dipped into the mixture a plate of copper, which did not grow white from thence.

These experiments were repeated by Monf. d'Arcet, and with the same effects; and would naturally seem to lead to the conclusion, that mercury does not enter the composition of the Rob Antisyphilitique.

Mr Buquet, however, was still inclined to think that there was reason to presume that it did contain mercury; and that the difficulty of disengaging it, arose from its being combined with the mucous saccharine matter of the composition. He therefore again submitted fresh quantities of the medicine to new experiments, after having mixed it with some distilled water. After filtration, he exposed a quantity of it in a retort to the heat of a reverberating furnace; what

what was thus obtained, was ſubmitted to other trials of the ſame kind, as above deſcribed in No. 1ſt, 2d, and 3d.

Next, Mr Buquet, after mixing eight ounces of melaſſes, with an equal quantity of diſtilled water, added thereto two grains of corroſive ſublimate. This ſolution he tried by the ſame experiments which had before been made with the Rob Antiſyphilitique. But neither by theſe, nor by the addition of acids, could he diſcover the leaſt ſign of the preſence of mercury. He then ſubſtituted mel mercurialis for the melaſſes, and made a ſolution of corroſive ſublimate as before. This ſolution ſhewed no ſign of the preſence of mercury, after being expoſed to the action of fire, or when a plate of copper was dipped in it. But when a lixivium of ſalt of tartar was added to ſome of it, a precipitate was obtained, which, when rubbed on gold, ſlightly whitened its ſurface.

From theſe different experiments, he drew the following concluſions.

1. That the lixivium of ſalt of tartar is the moſt proper means for diſcovering the preſence of mercury.

2. That

2. That mucous faccharine fubftances, efpecially honey, or fyrups of the extract of plants well boiled, are the beft means for concealing corrofive fublimate, and for entirely deftroying its very naufeous and difagreeable tafte.

The Antifyphilitique Rob has been given to the extent of eight ounces a-day; which quantity, Mr Buquet fuppofes, may contain from half a grain to three quarters of a grain of the corrofive.

May not thefe experiments lead the way to a commodious and agreeable method of curing fyphilis, if it were but determined by proper trials, that corrofive fublimate combined with fyrups, poffeffes the powers of mercury, and is not thereby rendered inactive?

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The following fhort view of fome chemical difcoveries, which have lately been made in Sweden, is extracted from a letter to Dr Duncan, from Dr Henry Ghan, Phyfician at Stockholm.

" Some chemical difcoveries have lately been made, fuch as, that magnefia nigra is reducible to a new femi-metal; and that the marmor metallicum, or heavy fpar, is a compound of vitriolic acid, and a new fpecies of earth, whofe attraction

traction to the vitriolic acid is very great. Both these have been made by my brother. That urinary ſtones moſtly contain the acidum ſacchari, by Mr Bergman. A new method of making mercurius dulcis, via humida. A new green colour of particular durability; ſome particular attractions of magneſia nigra to different acids. The properties and nature of molybdenum, or black lead. The properties of arſenic, which is a ſulphur that has a metallic colour, conſiſting of an acid ſui generis, and phlogiſton. Theſe, and ſome others, are diſcovered by the ingenious Mr Scheele. But all of them are written in the Swediſh language, and too long for me to tranſlate."

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We mentioned formerly, that a building had been begun at Edinburgh, for the uſe of the Public Diſpenſary of that place. It is with pleaſure we can inform our readers, that this building is now ſo far advanced, as to be already opened for the purpoſes of the inſtitution. The Managers of this charity have been enabled to make ſo much progreſs in this undertaking, in conſequence of having received aid, not only from benevolent inhabitants of Edinburgh, but from

from medical practitioners in many different parts of the Britifh dominions, who confider it as an object of importance to the Public, that the ftudents of medicine at Edinburgh fhould enjoy as many opportunities as the nature of the place can afford, of ftudying difeafes from nature, as well as from books; and of being the witneffes of actual practice, as conducted by different practitioners.

The fame motives which have already induced many to contribute to this undertaking, will, it is prefumed, operate with others. And although farther affiftance from the public be ftill wanting for finifhing the plan; yet there is room to hope, that the prefent managers will foon be enabled to complete what has been fo fuccefsfully begun by their predeceffors.

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On Monday the 7th of May, Dr Duncan and Dr Webfter, phyficians to the Public Difpenfary of Edinburgh, will begin their fummer courfe of lectures on the cafes of patients treated at that charitable inftitution.

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We mentioned formerly, that Dr Monro, the prefent Profeffor of Anatomy at Edinburgh, was

was engaged in publishing the whole works of his father, collected in one volume; and to all that had formerly appeared, several pieces were to be added, which had never before been printed. This work has now appeared, and for the title of it, we may refer our readers to the list of new publications. But a more distinct view of the additions may be had from the Editor's advertisement, in which he expresses himself in the following terms.

"I flatter myself, that this collection of the works of my father, will not only prove acceptable to his pupils and friends, but useful to the public. Many of them treat of practical subjects, and, in all, some application to practice is pointed out.

"To the works printed under his own inspection, I have added two pieces.

"The first is an oration De cuticula humana, delivered by him above forty years ago, in the common hall of the university of Edinburgh, in which many curious circumstances are described, which had escaped the observation of former anatomists; particularly the appearance of the fibres which connect the cuticula to the cutis vera, which, since that, have been annually demonstrated

monſtrated in the anatomical theatre at this place.

"The other piece, is an eſſay on comparative anatomy, compoſed from notes taken from his lectures, and publiſhed at London in the year 1744. But as this eſſay was publiſhed without his conſent or knowledge, and as many errors had crept into it, I have endeavoured to correct theſe, and have made a few additions to it, from obſervations collected by himſelf, with a view to a larger work on that ſubject.

"To the whole are prefixed an engraving, executed by Mr Baſſire, from an excellent portrait of my father, by Allan Ramſay, Eſq; and an account of his life, compoſed by my brother Dr Donald Monro, Phyſician in London."

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A pamphlet has lately been brought to this country, printed at New York, on a ſubject of ſuch importance, at the preſent period, as to recommend it to the attention of all who have any concern with the Navy, or indeed with maritime affairs. It is entitled, A ſhort Account of the moſt effectual Means of Preſerving the Health of Seamen. This treatiſe is written by Dr Gilbert Blane, Phyſician to the fleet under Sir George

 Rodney,

Rodney, and is dated, Sandwich, off Antigua, 21ſt Auguſt 1780.

The ſole object of this treatiſe, is to exhibit a conciſe view of the means by which diſeaſe may be prevented. The learned, obſervant, and ingenious author, goes ſo far as to aſſert his firm perſuaſion, that by a proper degree of attention we might almoſt entirely extirpate from the Navy ſome of thoſe diſeaſes which are there moſt fatal. The diſeaſes, of the prevention of which he particularly treats, are fevers, fluxes, and ſcurvy. We ſhall preſent our readers, at a future period, with ſome account of the directions given with reſpect to each. Meanwhile, however, we thought it would not be unacceptable to them, that we ſhould thus announce a treatiſe on a ſubject of ſuch importance, that every ſuggeſtion with reſpect to it cannot be too warmly recommended to the attention of thoſe whom it eſpecially concerns.

* * * *

Mr Alexander Hamilton, whoſe genius and induſtry are already well known to the medical world, by different publications on the ſubject of midwifery, has lately been elected conjunct profeſſor of midwifery, in the univerſity of Edinburgh,

burgh, with Dr Thomas Young, who has, for many years, taught that branch of medicine at Edinburgh, with no lefs credit to himfelf, than advantage to the public. Thefe gentlemen, we hear, propofe to teach alternately, the one beginning a courfe when the other finifhes. The induftrious ftudent will thus be furnifhed with a ready opportunity of hearing and examining the fentiments of different teachers on the fame fubject; a circumftance which muft, in a peculiar manner, tend to his improvement.

* * * *

The Harveian Society, at Edinburgh, inftituted with the views of commemorating the illuftrious dead, and of encouraging difcovery by experiments among the living, have propofed as the fubject of their annual prize for the year 1781, An experimental inquiry concerning the nature and properties of the bile.

* * * *

Dr Samuel Foart Simmons, Fellow of the Royal Society of London, and of the Royal Medical Society of Paris, was elected Prefident of the Medical Society of London, at their anniverfary meeting in January 1781. On that occafion, Dr Simmons delivered a Latin oration, on

the beſt method of proſecuting medical inquiries. As the ſubject is of the utmoſt importance, and as the author's abilities are well known, it is to be hoped that he will favour the public with this, as he has already done with ſeveral other ingenious and uſeful productions.

* * * *

On the 26th of December 1780, Dr John Fothergill, a member of many learned ſocieties, and author of many valuable publications, died in London. In the line of his profeſſion, Dr Fothergill was no leſs diſtinguiſhed for extenſive and ſucceſsful practice, than for zeal and attention in the improvement of the healing art. As a man, he was remarkable for one of the moſt ſhining virtues that can adorn the human character, unbounded benevolence.

* * * *

Dr William Lewis, author of an experimental hiſtory of the Materia Medica, and of the New Diſpenſatory, works which are in the hands of every practitioner, and from which their author has deſervedly acquired very high reputation, died at Kingſton upon Thames, on the 19th of January 1781.

SECT.

SECT. IV.

List of New Books.

EXPERIMENTS upon vegetables; discovering their general power of purifying the common air in the sun-shine, and of injuring it in the shade, and at night. By John Ingenhousz, M. D. 8vo. London.

Philosophical Transactions of the Royal Society of London. Vol. LXVIII. for the year 1778. Part II. 4to. London.

An answer to Baron Dimsdale's review of Dr Lettsom's observations on the Baron's remarks respecting a letter on general inoculation. By John Coakley Lettsom, M. D. F. R. S. and S. A. 8vo. London.

Confiderations on the propriety of a plan for inoculating the poor of London at their own houfes. 8vo. London.

An inquiry into the origin of the gout. By John Scott, M. D. 8vo. London.

An introduction to the theory and practice of furgery. By William Deafe. Vol. I. 8vo. London.

Thoughts on amputation; being a fupplement to the letters on compound fractures, and a comment on Dr Bilguer's book on this operation. To which is added, A fhort effay on the ufe of opium in mortifications. By T. Kirkland, M. D. 8vo. London.

Philofophical obfervations on the fenfes of vifion and hearing. To which is added, A treatife on harmonic founds, and an effay on combuftion and animal heat. By J. Elliot. 8vo. London.

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Practical obfervations on the treatment of confumptions. By Samuel Foart Simmons, M. D. 8vo. London.

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Reports of the Humane Society for the recovery of perſons apparently drowned. For the year 1778. 8vo. London.

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Conſpectus medicinæ theoreticæ, in uſum academicum. Auctore Jacobo Gregory, M. D. Med. Theoret. in Acad. Edin. Prof. &c. 8vo. Edinburgi.

Diſſertation ſur l'organe de l'ouie, 1°, de l'homme; 2°, des reptiles; 3°, des poiſſons. Par M. Geoffroy, Docteur Regent de la Faculté de Medecine, & Membre de la Societé Royale de Medecine. 8vo. Amſterdam.

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des Invalides, Membre du College de Pharmacie de Paris, de l'Academie des Sciences de Rouen, &c. 8vo. Paris.

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Dangers du maillot & du lait de femme; moyen d'y remedier; avis aux meres. Par M. Laſcazes de Compagne, Medecin de l'Iſle d'Alby, Docteur du Ludovicée de Montpellier. 12mo. Paris.

Gueriſon de la paralyſie par l'electricité. Ouvrage dedié à M. le Marechal Duc de Noailles. Par M. l'Abbé Sans, Chanoine, Profeſſeur-Doyen de Philoſophie en l'Univerſité de Perpignan. 12mo. Paris.

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